

7. "If I find it to be necessary, I will ask you to obtain sanction of a grant of money for providing women not accustomed to work out of doors with works to be done in their houses, e. g. cleaning cotton."

8. In submitting the above-mentioned proposals of the Sub-Divisional Officer of Nowada, the Collector of Gya has not stated what steps have been taken by him on them. He has now been asked to supply the omission. As soon as the information is received I shall submit a further report.

9. In the Behar sub-division in the district of Patna, owing to the late rain, the winter rice crop would be a 5 annas and *rabi* 14 annas.

10. The Sub-Divisional Officer reports that there is not at present exactly the same apprehension in regard to fodder as existed before the October rain, but still he cannot positively say that he is quite free from anxiety.

No. 10MA, dated Calcutta, the 30th November 1884.

From—A. SMITH, Esq., Commissioner of the Presidency Division,

To—The Secretary to the Government of Bengal, Revenue Department.

In continuation of this office letter No. 8MA, dated the 8th instant, I have the honour to submit the following fortnightly report for the first half of November on the prospects of the crops in those parts of Nuddea and Moorshedabad which have been affected:—

#### NUDEEA.

2. *Kaligunge thana of the Sudder sub-division.*—The prospects of the *rubbee* crops are reported to be good. There has been some pressure amongst the poor class of labourers and cultivators. Rupees 3,000 have been allotted by the District Road Cess Committee to open up road works with a view to afford relief to those requiring it.

3. *Thana Chagdah.*—The expected outturn of *amun*, including that on the low lands, may be estimated at 10 annas of an average year's produce.

4. *Inner circle of the Meherpore sub-division.*—The Sub-Divisional Officer of Meherpore reports as follows:—

"The actual state of things in the inner circle differs little from that reported in my Nos. 266 and 267, dated 22nd of October, but the prospects therein are greatly improved.

"At present a little relief is afforded by the unusual influx of the *kalai* into the market, which, as I reported before the Pujahs, was being sown in exceptionally large quantities with a view to anticipate the coming scarcity, signs of which were even then apparent.

"This influx of *kalai* has undoubtedly given great relief to the people, for the difficulty we had to deal with was the scarcity of grain in the market, and not so much the scarcity of money to purchase with.

"Another thing I notice is the usual exodus of people for the *Kalantur* and other great *dhan* fields along the Jellinghee has this year taken place earlier and to a greater extent than in previous years.

"It is said that owing to the late rains the *dhan* crop is earlier this year than last.

"I am therefore disposed to modify my last reports as to the great pressure people would feel, and I am of opinion that it will be greatly alleviated.

"There will, however, be a great deal of distress, as I said before, amongst those classes who cannot command labour owing to age, sickness, and the exigencies of their position, and I cannot but think that it would be as well to open up road works as relief measures, as I reported in my No. 266 of the 22nd October. An average wage of six pias a day would help people of this class considerably, and supplement the earnings of the stronger and more able-bodied members of the family. The prospects of the cold-weather crops are such as have seldom been seen in this sub-division, and all want and distress will in a few months' time be out of the question; but a little relief, such as I have recommended, might be given till the end of December with advantage."

5. Rupees 1,700 have been allotted by the District Road Cess Committee to open up road works in the distressed parts of the sub-division, out of which authorization for Rs. 1,000 has already been sent to the Sub-Divisional Officer by the District Magistrate.

The Officiating Collector of Moorshedabad, Mr. Farrer, reports as follows:—

"I am unable to go over the whole of the ground on this occasion, as my information is in many respects incomplete, and I have been prevented from proceeding into the interior myself on account of your having visited this district for the purpose of the annual inspection. I intend, however, to proceed into camp in a few days, and hope to remain out until the end of the month, when I shall be able to submit a much more complete account of the actual state of affairs. On this occasion I am compelled to confine myself to general observations, as I wish to verify the evidence that I have received before embodying it in a report of this nature.

"I purpose, therefore, on this occasion dealing with the whole of the district at once in my observations, except where local peculiarities of particular tracts render special mention necessary. Taking, then, the whole district altogether, I believe that the general

average yield of the *amun* crop will be about six annas (taking 16 annas as a full crop). Now, I believe that with a six-anna crop there would ordinarily be no very serious pinching, provided that a crop of that yield was reaped in every mourah in the district. This, however, is not the case, as of course the higher lands west of the Bhagirathi have suffered more from the scantiness of the rainfall than the low-lying lands in the three thanas Burwa, Hariharpara and Nawada east of that river, and to the south of the district. There is a tract of country in those three thanas called the *Kalantur*, where a bumper crop will be reaped, and this of course brings up the average for the district. The distribution of the rainfall this last season was also very peculiar, as on some occasions when copious rain fell in one quarter there was little or none in other parts of the district. Thus in thana Sagurdighi, west of the Bhagirathi, the rainfall was sufficiently abundant to permit of about 14 annas of the cultivable area being planted out, and a twelve-anna crop is there expected, whereas in thana Kalyangunge, immediately south of it, not more than 8 annas of the land have been cultivated, and not even a six-anna crop can be expected.

"The prospects of the *amun* are worst in the following thanas and outposts:—

*Jungipore Sub-division.*

- (1.) Suti.
- (2.) Mirzapore.

*Lalbagh Sub-division.*

- (1.) Kalyangunge (4 annas).
- (2.) Bhagwangola.

*Sudder Sub-division.*

- |                     |                 |
|---------------------|-----------------|
| (1.) Jellinghee.    | } 5 to 6 annas. |
| (2.) Dowlutbazar.   |                 |
| (3.) Goas.          |                 |
| (4.) Part of Burwa. |                 |

*Kandi Sub-division.*

- (1.) Thana Khargram.
- (2.) Outpost Gokurn.
- (3.) Outpost Saktipore.

"Regarding the district as a whole, I think that the pinching is being and will be most acutely felt in the tract called the *Rark*, the part of the district lying to the west of the Bhagirathi. This tract comprises thanas Suti and Mirzapore in the Jungipore sub-division, thana Kalyangunge in the Lalbagh sub-division, and the whole of the Kandi sub-division. I append a statement showing what provision has been made by the District Road Cess Committee for employing those who must have labour in order to live. The work has not been given out to contractors as in other years. The overseers pay the coolies direct. The ordinary rates are being given for earthwork and surface dressing: for the former Rs. 1-9 per 1,000 cubic feet, and for the latter 4 annas per 100 running feet. We have been carefully watching the numbers that assembled on these works: and so far there has been no remarkable rush. In fact, fewer have come in search of work than we expected. On all the roads throughout the district there have never been so many as 1,000 men working in the same day, but at this rate our funds would be exhausted by February next, if not sooner, and the question as to how the indigent must be employed will then arise.

"The present estimate then of the yield of the *amun* crop is that it will be six annas of a bumper crop; but, as I have already explained, there are many small tracts here and there where, owing to the peculiar distribution of the rainfall on the high level on which the land lies, not more than one or two annas will be reaped. The general average is brought up to six annas by the excellent harvest which is expected on the low lands known as the *Kalantur*.

"The *rubbee* crops have been sown under most favourable circumstances throughout the whole district, and are doing well, except in parts of Jungipore and Lalbagh sub-divisions, where they are said to have been damaged by caterpillars (*sua*), but unfortunately the *amun* crop is worst in the *Rark* country (west of the Bhagirathi), where the soil is most unsuitable for the production of *rubbee* crops, and the ryots have, therefore, but little hope of being able to put down crops of this kind to recoup themselves for the failure of their rice. They are, however, making experiments in the Kalyangunge thana with *rubbee* crops of different kinds, and the result must be awaited. It is unfortunate that these experiments should have to be made under circumstances so unfavourable: and this is evidence of the necessity of a Government experimental farm in each district, where the suitability of different kinds of soil for the several crops could be tested. In an emergency of this kind the ryots would then know what to sow.

"Undoubtedly the rain that fell during the last week of October effected a most marked improvement in the prospects of the *amun* rice, and elsewhere left the soil in a very



at condition for receiving the *rubbee* crops. The result was that most of the mahajans again consented to issue loans of money and rice, and this brought much relief to all that large class which subsist by cultivation.

"As regards the condition of the labouring class proper there is no immediate cause for anxiety. They are finding employment on our district roads, and there will very shortly be a demand for labour in the silk filatures and for reaping the *aman* rice. Next month we shall be in a position to say whether other relief works will or will not be necessary. The evidence at present before me is insufficient to enable me to form any final judgment on so important a question. I have heard a great deal of conflicting evidence, but must see the actual state of affairs with my own eyes before I can deliver an opinion: for the immediate present, sufficient provision is being made.

"Mr. Veasey's estimate of the stocks of old rice still remains good. Rice is still coming in from Beerbhoom, where I believe the stock of old rice is not inconsiderable. The market is slightly easier owing to the good reports received from other rice-producing districts. In Berhampore common rice is selling at 14 seers the rupee, and at Raghunathgunge in Jungipore at 14½ seers. In Kandi the rate is 13½ seers. The trade in general is dull, owing to the general poverty which of course prevails, this being the third bad season in succession.

"With reference, however, to my remarks, in which I estimate the outturn of the *aman* crop at 6 annas for the whole district, I beg to observe that it is not quite clear from the reports I have received that the two issues that arise have not been confused together. The only rational way of estimating the outturn of the crop in a year like the present, in which the work of transplanting has been rendered partially impossible by want of rain, is to determine (1) what proportion (in annas) of the area ordinarily under rice cultivation, taking that as 16 annas, has been planted out; and (2) what kind of a crop (in annas) may be expected on the land which has been transplanted. Thus if only 8 annas of the rice-growing area have been transplanted out, and only an 8-anna yield is expected over that area, there will only be a 4-anna crop reaped. I am directing Sub-Divisional Officers to separate these two issues in their next reports, in order that all confusion may be avoided, and I shall then be able to determine what proportion the present crop bears to a bumper crop in an ordinary season. Last year the question was a simpler one, as the first part of the season was favourable, and the whole of the area was planted out. A portion of the crop perished owing to the failure of the rains in September. On this and other doubtful points I shall endeavour to give a final expression of opinion in my report, which will be submitted at the end of the month."

7. It will be seen from the above extracts from the district reports that there has been considerable improvement in Nuddea. This report corresponds entirely with the opinion I have formed from my own observations during my tour. Mr. Farrer, in Moorsshedabad, reserves his final opinion till after a tour he contemplates making during this fortnight. I have, however, seen a considerable part of that district, and though I will await that report, I may now say that the result of my own observations leads me to think that even then there will be no severe distress. I have traversed the Moorsshedabad district from Nulhatti to Berhampore, from Berhampore to Kandi, and along the banks of the Bhagirathi from Berhampore to Kishnaghur. The crops which I saw were on the whole better than I had expected to see. The cold-weather crops generally were excellent on the banks of the Bhagirathi: in Moorsshedabad, some of them had been attacked by caterpillars. The extent of the damage that would result was uncertain, and next report will tell more of this. I trust, however, that the injury may prove less than was feared. I saw no signs of emaciation or anything indicating any suffering from want of food. An attempt was made to have a gathering of claimants for charity, when I was at Kandi, by way of a demonstration. It was, however, a complete failure. I have seen in ordinary and prosperous times a larger gathering of suitable objects of charity at the distribution on a Sunday of a rupee's worth of rice. Perhaps the worst part of the country I saw was in the Gokurn thana in the Kandi subdivision. Even there, however, the Deputy Magistrate, after making allowance for land left out of cultivation, estimated the outturn of the rice crop at one-fourth of an average crop, and the people were busy with grain and other cold-weather crops.

8. Mr. Farrer met me at my halting stages on my way from Berhampore to Kishnaghur in his district, but he examined the country on the bank of the river opposite to that in which I travelled, so that he would report to me of the country I did not see. His observations corresponded with my own. They were made after the report of which the substances extracted above was written.

9. With regard to relief, I do not think that more is at present needed in either district than is being done. The opening of the silk filatures in Moorsshedabad will give a large amount of labour, and will probably tend to draw away even those now employed on the roads; and it will be seen from the Magistrate's report that so far there has been no large or unusual rush. In Nuddea, where I am at present, and whence, consequently, I have the most recent information, the attendance has been falling off, the ordinary sources of labour, and notably the cold-weather crops, drawing them away.

## DISTRICT ROADS NOW UNDER REPAIR.

## Road on the left bank of Bhagirathi.

NAME OF ROAD.	Amount allotted.		Amount expended during the first two weeks of November, 1884.	
	Rs.	A. P.	Rs.	A. P.
Bhagwangola road (from Berhampore to Bhagwangola and a branch to Jeagunge ghât) ...	9,827	0 0	143	14 3
Jelinghi road (from Choonakhali to Jelinghi) ...	1,651	0 0	.....	.....
Pooranadewrea to Murcha ghât ...	1,466	0 0	69	7 9
Krishnaghur road (from Berhampore to the boundary of the district beyond Loknathpore) ...	1,253	0 0	4	0 0
Beldanga to Mojumpore road ...	142	0 0	.....	.....
Jungipore to Khamrah Serai ...	259	0 0	17	0 0
Old Calcutta road (from Partola to Bhapta) ...	221	0 0	11	8 0
Patkabari road (Girabazar at Berhampore to Patkabari) ...	1,638	0 0	82	15 3
Punchanund to Gobra Nullah road ...	210	0 0	12	11 6
Beldanga village road ...	80	0 0	.....	.....
Arral village road ...	40	0 0	40	1 0

## Road on the right bank of Bhagirathi.

Kandu road (from Ranbaghat to Kalli) ...	1,499	0 0	140	7 9
Jungipore to Mitherpore road ...	842	0 0	101	2 9
Road on the right bank of Bhagirathi from Ramnagar to Dholian ...	3,228	0 0	107	6 8
Badshahee road ...	1,771	0 0	181	14 3
Patchgaon road (from Dahapara to the boundary of the district beyond Patchgaon) ...	1,211	0 0	75	11 0
Khurgaon to Pardis road ...	516	0 0	120	3 0
Kandu to Shaktupore road ...	866	0 0	23	7 6
Burwan to Bilgram road ...	605	0 0	.....	.....
Kullu to Bilgram road ...	957	0 0	19	3 3
Kandi to Panka road ...	781	0 0	4	0 0
Burwan to Patchoopa road ...	220	0 0	.....	.....
Jungipore to Bokra ...	777	0 0	.....	.....
Gokurn village road ...	40	0 0	3	14 6
Mohalandee to Geatara village road ...	79	0 0	10	15 9
Chandpara village road ...	40	0 0	.....	.....
Rungmati to Gokurn village road ...	200	0 0	.....	.....
Newgaon to Kalyangunge ...	100	0 0	6	2 6
Total ...	30,510	0 0	1,126	4 6

## ERRATUM

For Table I published in the *Calcutta Gazette* of the 26th November 1884, read the following Table I:—

TABLE I.

	POOREE.				
	Manufacture of—				
	1879-80.	1880-81.	1881-82.	1882-83.	1883-84.
	Mds. s. c.	Mds. s. c.	Mds. s. c.	Mds. s. c.	Mds. s. c.
Balance at close of the last quarter ...	2,044 20 0	2,670 5 0	36,219 31 4	167,021 20 0	250,586 20 0
Manufacture or added during the quarter ...	.....	.....	.....	.....	43,373 30 0
Total ...	2,044 20 0	2,670 5 0	36,219 31 0	167,021 20 0	293,959 10 0
Sales during the quarter ...	.....	1,352 0 0	8,425 6 0	48,151 0 0	8,019 0 0
Wastage ...	2,044 20 0	.....	.....	300 5 0	.....
Total ...	2,044 20 0	1,352 0 0	8,425 6 0	48,541 5 0	8,019 0 0
Balance at close of the quarter ...	.....	1,718 5 0	27,794 25 0	119,080 15 0	285,941 10 0

A. P. MacDONNELL,  
Secretary to the Government of Bengal.

## Rainfall, Weather, and State and Prospects of the Crops.

Statement showing Rainfall, Weather, and State and Prospects of the Crops in the different Districts of Bengal, as reported to Government during the week ending the 13th December 1884.

No.	District, and date of return.	Rainfall at Sudder Station in inches.	Character of the weather, state and prospects of the crops, and state of health at date.
<b>BENGAL.</b>			
<i>Western Districts.</i>			
<b>BURDWAN DIV.</b>	1 Burdwan, Dec. 13 '84	Nil	Weather—seasonable. Outturn of <i>amun</i> paddy is generally not more than 6 annas. <i>Rubbee</i> crops promise well. Price of common rice varies from 16½ to 17 seers per rupee. Public health on the whole fair.
	2 Bankoora, „ 18 „	Nil	Weather—cold and occasionally cloudy. Cutting of <i>amun</i> paddy continues. Prospects of winter crops generally promising. Public health good; fever abating.
	3 Beerbhoom, „ 13 „	Nil	Weather—cold and fine. <i>Amun</i> paddy is being harvested; general outturn below the average. Sugarcane and other <i>rubbee</i> crops doing well. Food-grains cheap. Cases of cholera are reported, general health otherwise good.
	4 Midnapore, „ 13 „	Nil	Weather—seasonable. Prospects of all crops good. Sporadic cases of cholera in many parts of the district.
	5 Hooghly, „ 13 „	Nil	Weather—seasonable. Prospects of crops favourable. Fever and cholera still prevalent, but they are abating.
	Howrah, „ 15 „	Nil	Weather—seasonable. <i>Amun</i> paddy is being reaped with good outturn. Winter crops promise well.
<i>Central Districts.</i>			
<b>PRESDIBUT DIV.</b>	6 24-Pergha, Dec. 15 '84	Nil	Weather—seasonable. Prospects of crop are decidedly over the average. Public health generally good, though cases of cholera are reported from Diamond Harbour.
	7 Nudda, „ 13 „	Nil	Weather—cool, but slightly cloudy occasionally. Winter crops doing well.
	8 Khoolna, „ 13 „	Nil	Weather—mornings foggy, days clear. Harvesting of paddy going on well. Public health fair.
	9 Jessore, „ 13 „	Nil	Weather—cold. Harvesting of <i>amun</i> paddy still continues, prospects favourable. Cholera prevalent in some places in the Narail sub-division and fever in the Bongong sub-division.
<b>RAJSHAHY DIV.</b>	10 Moorshedabad, „ 13 „	Nil	Weather—bright and cool; cloudy at times. <i>Amun</i> paddy still being harvested. <i>Rubbee</i> crops good everywhere, though some damage is being done by insects. Rice is selling at from 14 to 17 seers per rupee. Public health good; cholera gradually disappearing.
	11 Dinagore, Dec. 12 '84	Nil	Weather—seasonable. <i>Amun</i> and sugarcane are still being cut; outturn expected to be fair. Prospects of <i>rubbee</i> crops good. Price of rice varies from 12 to 15 seers per rupee.
	12 Rajshahya, „ 13 „	Nil	Weather—cool. Harvesting of <i>amun</i> paddy still in progress. <i>Rubbee</i> crops promising well. Public health not good.
	13 Rangpore „ 13 „	Nil	Weather—seasonable. Prospects of winter crops good. <i>Amun</i> is being cut. Fever still prevalent. Cholera reported from the Gaibanda sub-division.
	14 Bogra, „ 13 „	Nil	Weather—getting colder. <i>Amun</i> paddy being harvested. Cold-weather crops doing fairly well. Public health fair.
	15 Pubna, „ 13 „	Nil	Weather—cold. Winter crops doing well. Fever abating in Serajganj.
	16 Darjeeling, „ 13 „	Nil	Weather—frosty and clear. <i>Haimanti</i> paddy and <i>marwa</i> show a falling off in yield owing to want of rain during the transplanting season. Public health good.
	17 Jalpigore, „ 13 „	Nil	Weather—seasonable; mornings foggy. <i>Haimanti</i> paddy being cut and is on the whole a fair crop, though below the average. Cold-weather crops all doing well. Public health fairly good; fever still prevalent.
<i>Eastern Districts.</i>			
<b>DAOGA DIV.</b>	18 Daoga, Dec. 13 '84	Nil	Weather—cold. <i>Amun</i> and <i>roachia</i> paddy are being harvested; outturn good. Cutting of sugarcane continues. Pulses are being sown. <i>Boro</i> being transplanted. Prospects of crops good. Some cases of cholera are reported from parts of the district.
	19 Furreadpore, „ 13 „	Nil	Weather—cold and clear. Condition of crops good. Prices falling. Cholera abating.
	20 Backergungo, „ 11 „	Nil	Weather—seasonable. Reaping of <i>amun</i> paddy continues. Fever and cholera are still prevailing in some parts of the district.
	21 Mymensingh, „ 13 „	Nil	Weather—seasonable. Prospects of crops good. Cholera still present in the district, but it is abating.



No.	District and date of return.	Rainfall at Sudder Station in inches.	Character of the weather, state and prospects of the crops, and state of health at date.
<b>BENGAL—contd.</b>			
<i>Eastern Districts.</i>			
CHITTAGONG DIV.	22 Chittagong, Dec. 15 '84	Nil	Weather—seasonable. Prospects of crops good. Outturn of <i>amwa</i> paddy is estimated at twelve annas. Prices of food-grains stationary. Cholera still reported.
	23 Nonakholy, „ 12 „	Nil	Weather—fair and seasonable. <i>Amwa</i> paddy is being harvested. <i>Rubbee</i> crops are being sown. Cholera reported from Rangunge, Begungunge, and Sentag.
	24 Tipperah, „ 11 „	Nil	Weather—seasonable, cool and fine. Harvesting of paddy continues with good outturn. <i>Rubbee</i> crops thriving well. Prices stationary. Cholera reported from several stations, otherwise public health good.
	25 Chittagong Hill Tracts, „ 9 „	Nil	Weather—seasonable; cold and foggy in the morning. Gathering of cotton nearly over. Mustard is being sown. Plough-paddy doing well. Public health fairly good.
	Hill Tipperah, „ 10 „	Nil	Weather—seasonably cool. <i>Amwa</i> paddy is still being reaped. <i>Til</i> and cotton are being gathered. Sowing of chillies, tobacco and mustard completed. Public health good.
<b>BKHAH.</b>			
PATNA DIV.	26 Patna, Dec. 13 '84	Nil	Weather—seasonable. Reaping of paddy and <i>jowar</i> is going on. <i>Rubbee</i> crops are growing splendidly. Gram, peas and linseed are flowering. Poppy is growing well. Public health good.
	27 Gaya, „ 13 „	Nil	Weather—rather cool and dry until this day, when sky cloudy. Both <i>rubbee</i> and poppy crops promise well. Paddy and <i>kurkhee</i> are in process of harvesting. Sugarcane pressing has commenced. Public health good.
	28 Shahabad, „ 13 „	Nil	Weather—cloudy. Prospects of crops, including those of poppy, excellent.
	29 Darbhanga, „ 13 „	Nil	Weather—seasonable. Tobacco, paddy and <i>rubbee</i> crops doing well. New rice coming into the market. Prices almost stationary except those of the new rice which is slightly falling. Public health good.
	30 Mouzerpore, „ 13 „	Nil	Weather—seasonable. Harvesting of paddy in progress; <i>rubbee</i> crops continue to be very promising. Prospects of poppy generally favourable, excepting slight injury done by grasshoppers in certain places.
	31 Saran, „ 13 „	Nil	Weather—fair; gradually getting colder. Harvesting of paddy briskly going on; prospects of <i>rubbee</i> crops continue favourable; young poppy plants are looking strong and healthy. Prices of food-grains falling. Public health good.
	32 Champaran „ 13 „	Nil	Weather—seasonable. Prospects of crops continue favourable. <i>Aghani</i> paddy is being reaped. Young poppy plants looking healthy, weeding is in progress. Public health good; some cases of fever are reported from the interior.
BHAGALPORE DIV.	33 Monghyr, Dec. 13 '84	Nil	Weather—seasonable; warmer and cloudy last two days. <i>Aghani</i> paddy is being reaped throughout the district. Prospects of <i>rubbee</i> crops continue good. Prospects of poppy good. Prices stationary. Outbreak of small-pox reported at Kharsagpur, otherwise public health good.
	34 Bhagalpore, „ 13 „	Nil	Weather—cold and bright, warm and cloudy for last two days of the week. Harvesting of paddy going on; 11 annas outturn in the south, 12 annas in the north expected. <i>Rubbee</i> crops promising, but some injury has been done by blight. Public health good, but some cases of fever are reported from the tracts on the banks of the Kusi. Prices falling. Rice selling at 14 seers per rupee in the south and 20 seers in the north.
	35 Purneah, „ 13 „	Nil	Weather—fine and seasonable. Prospects of <i>rubbee</i> crops still continue good; rain will soon be required, however, in parts of the district. <i>Aghani</i> paddy very poor in the Sudder thana. A few cases of cholera, fever abating.
	36 Maldah, „ 13 „	Nil	Weather—fine and cool. Harvesting of winter paddy continues; the general outturn is about eight annas of an average crop. Prospects of <i>rubbee</i> crops good. <i>Kutai</i> and mustard have been damaged by insects. Prices of food-grains stationary. General health good.
	37 Sonthal Perghe, „ 13 „	Nil	Weather—cold with occasional clouds. Cutting of <i>aghani</i> paddy is now well advanced. Prospects of <i>rubbee</i> crops continue to be favourable; a little rain would considerably improve these crops. Prices inclining to fall. Public health good.
<b>ORISSA.</b>			
ORISSA DIV.	38 Cuttack, Dec. 12 '84	Nil	Weather—very cold. Reaping of <i>sarad</i> in progress; late <i>sarad</i> ripening and in some places it is being cut with favourable outturn. <i>Rubbee</i> crops flowering. Price of rice stationary, notwithstanding the large export. Public health generally good except that cholera still continues here and there.
	39 Pooree, „ 11 „	Nil	Weather—seasonable. <i>Sarad</i> is being harvested. <i>Dalua</i> and <i>rubbee</i> crops are being sown. Sugarcane is being crushed. Miscellaneous crops doing well. Common rice selling at an average of 22 seers 10 chittacks per rupee in the Sudder sub-division and 25 seers 5 chittacks in the Khorda sub-division. Cholera still reported.
	40 Balasore „ 12 „	Nil	Weather—seasonable. Harvesting of <i>sarad</i> in progress. Prospects of <i>rubbee</i> crops continue favorable. Sporadic cases of cholera and fever are reported from the interior.
<b>CHOTA NAGPORE.</b>			
<i>South-West Frontier Agency.</i>			
	41 Hazaribagh, Dec. 12 '84	Nil	Weather—very cold. Harvesting of paddy continues. <i>Rubbee</i> crops doing well. Prospect of poppy fair where water is procurable. Public health generally good.
	42 Loharunga, „ 13 „	Nil	Weather—seasonable. Sky cloudy at times, and it is hoped some rain may soon fall which will prove very beneficial to <i>rubbee</i> crops, prospects of which continue generally good. Harvesting of paddy mostly over. Prices easy. General health good.
	43 Singhbhum, „ 12 „	Nil	Weather—seasonable. Harvesting of late paddy continues with an excellent outturn. All cold-weather crops are also doing well. General health good.
	44 Manbhum, „ 13 „	Nil	Weather—seasonable. Harvesting of paddy continues briskly. Sugarcane and cotton growing. <i>Conse</i> rice (new) sold at the Purulia market on the 13th instant at 22 seers per rupee. Public health good.

Published for general information.

CALCUTTA, STATISTICAL DEPT.,  
The 16th December 1884.COLMAN MACAULAY,  
Secy. to the Govt. of Bengal.

## Results of the Meteorological Observations taken at the Alipore Observatory from 7th to 13th December 1884.

Month.	Date.	Maximum in sun.	Number of hours of bright sunshine.	Mean pressure barometer at 29° Fahr.	TEMPERATURE.				HYGROMETRY.				WIND.		Rain.	WEATHER.
					Mean.	Maximum.	Range.	Minimum.	Mean wet bulb.	Vapour tension.	Dew point.	Humidity.	Prevailing direction.	Miles recorded.		
1884.		°		Inches.	°	°	°	°	°	Inches.	°	%.			Inches.	
Dec.	7th	128.6	9.7	30.095	81.0	76.9	19.4	56.5	58.0	0.407	63.2	70	N by W and N by E	131	Nil.	Partially cloudy, P.
"	8th	129.6	9.9	.076	63.4	74.6	19.0	55.6	56.7	.373	50.3	66	N by E, NNW and WNW.	117	"	Partially cloudy, P.
"	9th	130.6	9.5	.015	63.5	75.1	22.3	52.8	58.5	.381	51.4	68	NW by W and NNW	85	"	Partially cloudy, P.
"	10th	128.4	9.2	29.280	63.0	76.6	23.9	52.7	57.9	.417	53.9	74	WNW and NW by N	71	"	Partially cloudy, P.
"	11th	125.7	8.5	30.082	65.3	76.6	19.3	57.3	60.3	.461	56.7	76	NW by N and NNW	60	"	Partially cloudy, P.
"	12th	128.0	9.7	.123	64.7	76.8	30.3	56.3	60.4	.471	57.9	77	NNW, N and NW by W.	66	"	Clear, D.
"	13th	129.7	9.3	.091	64.3	76.0	21.4	55.2	59.4	.443	55.5	73	NW by W and NNW	64	"	Clear, D.

The mean pressure of the seven days

The average pressure of the corresponding period for 24 years, S. G.'s Office

Inches

30.059

30.024

The total number of hours of bright sunshine

Hours.

66.8

The maximum possible number of hours of sunshine

75.2

The mean temperature of the seven days

°

63.9

The average temperature of the corresponding period for 24 years, S. G.'s Office

63.4

The extreme variation of temperature

23.9

The maximum temperature

76.6

The highest velocity of the wind in one hour

Miles.

11

Se.

The highest pressure of wind on one square foot

Not measureable

The mean relative humidity

%

72

The average relative humidity of the corresponding period for 24 years, S. G.'s Office

71

The total fall of rain from 7th to 13th December 1884

Inches.

Nil

The average fall of the corresponding period for 24 years, S. G.'s Office

0.03

The total fall from 1st January to 13th December 1884

62.61

The average fall of the corresponding period for 24 years, S. G.'s Office

65.22

The mean pressure, temperature, &c., are deduced from the traces of the Barograph and Thermograph, and from observations made at 6h, 10h, 16h, and 22h.

The maximum and minimum temperatures are obtained from self-registering thermometers. All the thermometers are verified, and the readings have been corrected to a standard constructed and verified at the Kew Observatory. They are exposed under a thatched shed open at the sides, and are suspended four feet above the ground.

The barometer readings are corrected approximately to those of the standard Newman's No 86 formerly at the Surveyor-General's Office.

The hygrometric elements are obtained from Tables III, IV, and V of the official tables computed in the Meteorological Office, and based on Reguani's modifications of August's formula.

The directions and the movement of the wind are taken from the trace of a Beckley's anemograph.

The mouth of the rain-gauge is one foot above the ground.

c. dew; = fog.

W. L. DALLAS,

METEOROLOGICAL OFFICE, INDIA;

For Meteorological Reporter to the Government of India.

Calcutta, the 15th December 1884.

## Meteorological Report of the Province of

METEOROLOGICAL DIVISION.	DISTRICT.	Representative stations.	STATION OBSERVATIONS.															
			AIR PRESSURE.					TEMPERATURE.					HUMIDITY.		CLOUD.		Rainfall.	
			Highest, 10 A.M., barometer reading of month.	Lowest, 10 A.M., barometer reading of month.	Mean, 10 A.M., for month.	Mean reduced to sea-level.	Variation from normal mean.	Highest of month.	Lowest of month.	Mean daily maximum temperature.	Mean daily minimum temperature.	Mean daily temperature.	Variation from normal mean.	Mean, 10 A.M., humidity.	Variation from normal mean.	Mean cloud amount, 10 A.M.		Variation from normal mean, 10 A.M.
CENTRAL.	Pooree	Gopalpore	30.166	29.873	29.994	30.044	—	81.8	57.0	78.4	66.0	72.2	—	64	—	2.3	—	NH
		False Point	30.135	29.879	30.039	30.051	+0.04	87.4	52.5	80.7	60.8	70.8	-3.8	63	-10	3.8	+0.8	0.00
	Outtack	Outtack	30.075	29.831	29.978	30.030	+0.17	89.9	56.3	83.4	62.5	73.2	-2.5	57	-11	2.7	+5.4	NH
	Balasore	Balasore	30.103	29.839	30.007	30.007	—	85.5	50.1	81.0	58.0	69.7	—	55	—	0.8	—	NH
SOUTH-WEST BENGAL.	South-West Midnapore and South 24-Pargunnahs.	Saugor Island	30.124	29.810	30.031	30.046	+0.01	84.3	55.9	79.6	64.8	71.9	-2.8	67	-6	3.8	+1.4	NH
	Midnapore	Midnapore	30.014	29.777	29.912	30.007	—	85.8	52.2	81.0	58.7	69.8	—	61	—	2.1	—	NH
	24-Pargunnahs, Howrah, and Hooghly.	Calcutta	30.183	29.839	30.039	30.051	+0.01	85.1	53.3	79.8	63.8	71.1	-2.2	61	-18	3.2	-0.2	NH
	Burdwan	Burdwan	30.079	29.804	29.955	30.009	+0.13	83.2	53.1	81.0	60.0	70.8	-2.7	55	-13	2.3	-0.4	NH
SOUTH-EAST BENGAL.	West Burdwan, Bankura, and Beerbhoom.	Raniganj	29.831	29.563	29.727	—	—	86.0	52.3	81.8	57.4	69.6	—	55	—	1.6	—	NH
	Moohadabad	Sorhampore	30.103	29.835	29.990	30.039	+0.18	83.6	55.7	80.0	61.0	70.8	-3.8	60	-7	1.3	-1.4	NH
	Nuddes	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Jessore and Khoulia	Jessore	30.110	29.823	30.000	30.040	+0.08	84.7	52.5	81.4	61.0	71.2	-2.7	63	-10	2.4	+0.3	0.12
NORTH BENGAL.	Chittagong	Chittagong	30.039	29.775	29.930	30.023	+0.07	85.1	55.9	80.1	63.8	71.0	-2.9	60	+3	3.6	+1.1	2.25
	Chittagong Hill Tracts	Demagiri	—	—	—	—	—	83.0	59.1	79.4	64.4	71.9	-1.5	—	—	1.9	+1.3	2.06
	Backerganj	Barrisal	30.010	29.838	29.946	—	—	83.1	58.1	77.1	64.8	74.9	—	78	—	2.4	—	2.55
	Noakholly	Noakholly	30.057	29.837	29.967	30.015	—	87.5	55.3	80.6	63.1	71.3	—	71	—	1.2	—	0.45
NORTH BENGAL.	Furzedpore	Furzedpore	30.090	29.877	30.007	—	—	83.0	53.0	80.1	61.0	70.8	—	60	—	2.0	—	0.39
	Dacca	Dacca	30.120	29.888	30.004	30.027	+0.10	87.3	50.0	81.6	62.3	71.8	-2.9	71	-1	1.7	-0.3	0.87
	Comillah	Comillah	30.008	29.881	29.945	30.021	—	80.4	54.0	81.9	61.3	71.3	—	72	—	0.9	—	2.07
	Mymensingh	Mymensingh	30.071	29.840	29.953	—	—	85.4	53.1	81.8	60.4	74.1	—	49	—	4.3	—	0.71
NORTH BENGAL.	Bogra and Pubna	Bogra and Pubna	30.117	29.878	29.991	30.039	—	85.2	53.1	80.4	60.0	70.1	—	70	—	1.9	—	0.88
	Rajahmundry	Rajahmundry	30.071	29.817	29.950	30.033	—	?	47.7	?	58.0	?	—	50	—	0.6	—	NH
	Dinapore	Dinapore	30.044	29.797	29.920	30.032	—	83.0	52.3	80.9	60.0	68.7	—	62	—	0.4	—	NH
	Bungpore	Bungpore	30.043	29.828	29.923	30.054	—	85.8	50.1	81.1	59.5	69.0	—	70	—	0.6	—	NH
NORTH BENGAL.	Jalpigore and Cooch Behar.	Jalpigore	29.560	29.630	29.742	30.040	—	84.9	41.1	81.0	63.8	67.4	—	60	—	0.8	—	NH
	Darjeeling Hill Tracts	Darjeeling	29.112	29.012	29.069	—	—	63.1	35.6	52.8	58.2	49.7	—	70	—	3.4	—	0.05
	Purneah and North Bhagulpore.	Purneah	30.062	29.810	29.937	30.039	+0.29	84.7	49.7	79.3	62.0	66.0	-5.4	63	-1	0.4	-0.7	NH
	Mosuffepore and Darbhanga.	Darbhanga	30.014	29.798	29.908	30.074	+0.01	86.4	53.4	78.0	69.1	68.8	-2.3	67	-2	0.3	-0.8	NH
SOUTH BENGAL.	Chumpram	Motihari	29.935	29.731	29.834	30.050	—	85.6	49.8	80.3	62.2	66.8	—	63	—	0.5	—	NH
	Serua	Chupra	29.940	29.741	29.840	—	—	84.6	50.7	79.9	60.0	66.4	—	60	—	0.4	—	NH
	Shahabad	Arrah	30.167	29.743	29.855	30.054	—	84.3	49.1	79.2	63.1	67.3	—	60	—	0.3	—	NH
		Dahree	29.780	29.588	29.707	30.075	—	87.0	50.0	76.3	58.0	67.1	—	61	—	0.8	—	NH
SOUTH BENGAL.		Buxar	29.918	29.714	29.815	30.063	—	84.4	49.4	80.1	63.2	67.8	—	40	—	0.4	—	NH
	Gya	Gya	29.785	29.547	29.675	30.060	?	84.3	48.1	80.0	64.3	67.6	-3.5	44	-12	0.2	-1.7	NH
	Patna	Bankipore	30.018	29.785	29.905	30.097	+0.30	83.3	51.8	78.9	67.0	68.3	-2.1	60	-2	0.5	-1.4	NH
	South Bhagulpore and Mooghly.	Bhagulpore	29.939	29.754	29.844	30.051	—	83.4	50.0	78.5	65.5	67.0	—	57	—	0.3	—	NH
SOUTH BENGAL.	South Pargunnahs	Naya Doomke	29.034	29.424	29.547	—	—	83.6	40.6	79.4	65.6	67.6	—	70	—	0.3	—	NH
	Hazratibagh	Hazratibagh	29.104	27.015	28.013	30.074	+0.00	79.4	50.3	73.3	64.1	64.7	-2.3	42	-12	0.0	-1.7	NH
	Lohardugga and Manbhoom.	Manbhoom	27.968	27.796	27.883	30.062	—	80.8	46.4	73.9	62.4	65.2	—	50	—	0.0	—	NH
	Singuboom	Chalibass	29.345	29.113	29.247	—	—	?	48.0	?	53.0	?	—	48	—	1.1	—	NH



DISTRICT OBSERVATIONS.										Representative stations.	DISTRICT.	HYDROLOGICAL DIVISION.
RAINFALL.												
Of month.					Since 15th May.							
Mean of district.	Normal mean.	Variation from mean.	Number of rainy days.	Normal mean number of rainy days.	Mean of district.	Normal mean.	Variation.	Mean number of rainy days.	Normal mean number of rainy days.			
0.00	2.05	-1.90	1.5	2.6	49.40	57.10	-7.61	51.4	70.2	Gopalpora	Pooree	ORISSA.
NH	0.95	-0.95	0.0	1.4	47.65	52.20	-4.55	77.5	70.8	False Point	Cuttack	
0.03	0.05	-0.03	0.2	1.5	50.08	53.33	+3.25	79.9	75.6	Cuttack	Cuttack	
NH	0.66	-0.66	0.0	1.5	60.59	61.61	+1.02	90.9	83.6	Balasore	Balasore	
NH	0.28	-0.28	0.0	1.0	43.01	40.50	-2.51	65.6	70.2	Saugor Island	South-West Midnapore and South 24-Pargunnahs.	
0.62	0.30	-0.32	0.5	1.3	40.95	50.30	-9.35	87.7	89.7	Midnapore	Midnapore	
NH	0.27	-0.27	0.0	0.8	35.92	46.16	-10.24	70.6	74.2	Calcutta	24-Pargunnahs, Howrah, and Hooghly.	
0.03	0.26	-0.23	0.1	0.8	38.94	50.90	-11.96	70.9	80.6	Burdwan	Burdwan	
NH	0.31	-0.31	0.0	0.0	35.43	40.50	-5.07	71.3	78.9	Ranigunj	West Burdwan, Bankura, and Beerbhoom.	
NH	0.39	-0.39	0.0	0.9	30.42	40.93	-10.51	65.6	74.8	Berhampore	Moorshedabad	
0.28	0.43	-0.15	0.7	1.2	53.11	52.01	+1.10	80.6	82.0	Naddea	Naddea	
2.74	1.35	+1.41	2.5	2.1	100.84	111.71	-10.87	109.0	105.5	Jessore	Jessore and Khoulna	
2.41	1.73	+0.68	2.0	2.4	62.66	55.73	+6.93	114.5	112.5	Chittagong	Chittagong	
4.13	0.60	+3.53	1.0	1.7	53.11	70.23	-17.12	98.1	105.1	Domari	Chittagong Hill Tracts	
7.53	2.11	+5.42	2.0	2.3	25.44	100.96	-75.52	100.5	109.9	Barrisal	Backergunj	
0.63	0.41	+0.22	1.3	1.0	45.55	50.90	-5.35	74.0	87.7	Noakholy	Noakholy	
0.77	0.04	+0.73	1.0	1.3	47.81	58.64	-10.83	89.9	86.6	Furzedpore	Furzedpore	
1.81	0.67	+1.14	1.8	1.4	64.15	70.68	-6.53	85.7	97.3	Dacca	Dacca	
0.34	0.30	-0.04	1.0	1.0	46.04	68.51	-22.47	80.7	91.1	Commilleh	Commilleh	
0.15	0.42	-0.27	0.3	1.0	37.73	55.75	-18.02	62.1	74.6	Mymensingh	Mymensingh	
NH	0.24	-0.24	0.0	0.3	34.06	53.11	-19.05	76.3	77.8	Sorjganj	Bogra and Pubna	
NH	0.00	-0.00	0.0	0.4	38.74	56.38	-17.64	73.7	75.0	Rampore Beaulieu	Rajshahye	
NH	0.13	-0.13	0.0	0.3	40.70	75.41	-34.71	69.4	75.4	Dinagore	Dinagore	
NH	0.07	-0.07	0.0	0.3	56.25	115.65	-59.40	88.6	07.6	Rangpore	Rangpore	
0.01	0.28	-0.27	0.3	1.3	113.01	152.08	-39.07	103.0	117.3	Jalpigoree and Cooch Behar.	Jalpigoree and Cooch Behar.	
NH	0.07	-0.07	0.0	0.2	40.18	57.60	-17.42	63.8	67.2	Darjeeling	Darjeeling Hill Tracts	
NH	0.09	-0.09	0.0	0.4	34.69	42.14	-7.45	49.6	55.4	Purneah	Purneah and North Bhagalpore.	
NH	0.08	-0.08	0.0	0.4	41.79	43.04	-1.25	47.0	52.3	Durbhunga	Mozufferpore and Durbhunga.	
NH	0.23	-0.23	0.0	0.4	30.52	40.78	-10.26	53.5	55.3	Motibari	Champaran	
NH	0.31	-0.31										

Table of Rainfall recorded at Stations

Metereological division.	District.	Station.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Orissa	Pooros	Pooros	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Khurda	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Bangpur	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		False Point	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Huokitola	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Jaratalsingpur	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Banki	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Cuttack	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Kendrapara	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Jajpore	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
SOUTH-WEST BENGAL	Balesore	Chandbali	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Bhuddruck	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Serah	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Balesore	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Jelmare	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Baripodah	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Midnapore	Contal	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Saugor Island	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Tumlook	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Midnapore	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
24-Paraganahs	Diamond Har-	bour.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Alipore Jail	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Barrackpore	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Dum-Dum	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Baraset	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Basorhat	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Howrah	Howrah	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Moheraka	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		(Oulberia)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Hooghly	Serampore	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Burdwan	Hooghly	Hooghly	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Jehanabad	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Burdwan	Culina	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Burdwan	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Culina	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Bano-gunge	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Bankura	Bankura	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Indus	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Bishenpore	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Kotalpore	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Barrabuzum		Malara	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Onda	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Khakra	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Barrabuzum	Rh. Soory	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Belampore	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Nuddea	Bongong	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Banachut	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Kishincher	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Choudanga	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Meharpore	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Khoolna		Koushta	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Khoolna	Kutkira	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Raghat	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Khoolna	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Isapore	Narail	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Jessore	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Jhenidah	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Magorah	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Moorsabadabad	Kandi	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Rampore Hant	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
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		Lalbagh	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Ashtagunge	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Jungipore	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Lalgola	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
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	Chittagong Hill Tracts.	Rangabazi	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Reicha	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Agartala	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Nagarkhango		Patnabally	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Perzepore	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Burrial	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Ukha	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Noukhelly	Noukhelly	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Penny	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Parredypore	Madripore	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Parredypore	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Goulango	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Dacca	Munabirgung	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
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		Namkhurung	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Manickgung	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Cumilla	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Chandpore	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Brahmunberia	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Mymensingh	Kishoregung	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Alm	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Mymensingh	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Jamalpore	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

Explanation--Indicates that no rain has fallen. If the return for any day has not been received, the corresponding space is left blank.

in Bengal in November 1884.

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1984-1985-1986

NOTE: If some of the returns are wanting, the corresponding spaces in the total rainfall column are left blank.





in Bengal in November 1884—concluded.

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*Table for October 1884.*

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JOHN ELIOT,  
*Meteorological Reporter to the  
 Government of Bengal.*

### METEOROLOGICAL AND RAINFALL SUMMARY FOR THE MONTH OF NOVEMBER 1884.

*Normal Meteorological features of the month.*—The usual conditions of the meteorology in Bengal during November are simple; the north-east monsoon generally establishes itself in Bengal before the close of October, and thus November is characterized by rapidly falling temperatures, especially at night, clear if not cloudless skies, and little or no rain. Wind directions too are usually northerly with a more or less westerly element in them, and generally only light and gentle winds prevail. These northerly winds gradually drive back the south-west monsoon winds which had previously swept over the whole Bay, and cause them to curve inwards and to re-appear on the Madras coast as what is there called the north-east monsoon, which current gives heavy rain to the Madras Presidency. These conditions are, however, liable to be disturbed by two causes: the first of which is the formation in the Bay of Bengal of a cyclonic vortex, large or small as the case may be, generated by the condensation of large quantities of rain in the front of the gradually retreating south-west monsoon, which, although it has ceased to affect Bengal, continues to blow in the south of the Bay during a great part of November. The formation of such a vortex has always an influence on the weather in Bengal, and while, if it passes into Bengal, the whole weather conditions are completely changed, yet even if it passes into Burma or into Southern India the weather conditions are always more or less affected by it. It is, however, very rarely that a cyclone thus generated in the Bay passes into Bengal in November, and in those cases, where cyclones have thus passed into Bengal in this month, it is usually quite at its commencement, for during the latter part of this month cyclones are only formed in the south of the Bay and usually pass towards the Madras coast, striking it between Madras and Negapatam.

The second disturbing element in the weather of November is from an opposite cause, and is due to the occurrence of land storms generated, it is believed, usually in the Punjab, which storms drift eastwards through the North-West Provinces, and sometimes influence the weather in Behar and Bengal very considerably. It is, however, an extremely rare thing for such a storm to enter Bengal in November, though they sometimes do so in the later months of the north-east monsoon.

In the case of both disturbing causes, they produce clouded skies, increased humidity and temperature, and light to moderate rain, or if the locality is directly influenced by a cyclone, then of course heavy rain is received. Excepting, therefore, under these circumstances, weather during November is fine with passing clouds, and there is little, if any, rainfall. The average normal rainfall in the whole of the provinces, excepting the Chittagong, Backergunge and Noakholly districts of East Bengal, and the Cuttack and Pooree districts in Orissa, is not more than a few tenths of an inch, while in these exceptional districts the average rainfall varies only from one to three inches.

*Meteorological summary of the month.*—During the closing week of October a considerable burst of rainfall occurred over the greater part of Bengal; but on and after the 27th the north-east monsoon had spread itself over the whole province, giving northerly winds with fine weather, a falling temperature, and clear skies. South-west monsoon winds were, however, probably still blowing in the centre of the Bay, and weather became unsettled in the Bay on the 31st instant, with the result that a small cyclonic whirl was generated near the head of the Bay. This storm must have been comparatively small and local, though rather severe in character, for it gave little or no indication of its existence till it reached the Chittagong coast on the 1st of November, crossing the mouth of the Megna into the Noakholly and Commillah districts. It had, however, filled up and almost disappeared before the 2nd, and thus the observations gave little indication of its character. Very strong winds, however, accompanied it and blew at Chittagong from about noon to 5 P.M. of the 1st, during which time they did a considerable amount of damage. Heavy rain accompanied this storm, and was received in the districts through which it passed, as will be subsequently noticed. On the morning of the 3rd, north-east monsoon gradients were again established in the Bay, and the south-west monsoon current was deflected towards the Madras coast, reaching it as a north-easterly current, when it occasioned very heavy rain; Madras receiving nearly 23 inches and Negapatam 21½ inches in the period from the 3rd to the 10th of the month. The strong monsoon thus blowing on the Madras coast intensified the north-east monsoon winds in Bengal, and one of the principal features in the meteorology of the month has been the rapid and complete establishment of the cold weather conditions. Towards the middle of the month, however, rain ceased to fall for some days along the Madras coast, and it was shewn by the logs of several vessels received during the month that heavy rainfall was occurring over the sea area in the south of the Bay from the 11th to the 16th. This was at first accompanied in Bengal by a falling barometer, and the skies commenced to cloud over, while a few light showers fell in Orissa and East Bengal. The excessive rainfall at sea apparently accompanied or gave rise to a small cyclonic disturbance which passed across the Madras coast on the morning of the 21st, giving extremely heavy rain again in the districts through which it passed. The indraught to this storm, as it passed inland, again increased the intensity of the north-east monsoon conditions in Bengal, and with the continuance of the strong monsoon on the Madras coast, these conditions have held up to the close of the month, and the whole of the latter portion of it has again been characterised by the steadiness of the northerly and westerly winds, the absence of cloud, the comparatively low temperature, especially at nights, and the dryness of the air.



**Pressure**—Was at the commencement of the month decidedly below the normal owing to the approach of the small cyclonic storm noted above, and afterwards with the re-establishment of the north-east monsoon conditions it commenced to increase, and then oscillated within narrow limits about the normal until the second week, when a rapidly falling barometer gave rise to the formation of cloud in Bengal. From the 14th, however, pressure recovered itself, but only to decrease again during the formation of the small cyclone in the south of the Bay. When the storm had passed inland, pressure again increased and has been generally above the average up to the close of the month. The mean pressure of the month has thus been slightly above the normal, but this excess is to a great extent confined to Behar, where it equals 0.04", and to parts of South-West Bengal where it equals 0.02" nearly.

**Temperature**—Has been in all districts very considerably in defect. The average defect for the whole province has been more than 3°, and it varies from 5.4° at Purneah to 2.1° at Bankipore. The defect appears to be principally due to the unusually low night temperatures which have been experienced during this month, and which in some instances have averaged nearly seven degrees below the normal mean.

**Rainfall**—During the month has been practically confined to two short periods, and also to a few localities as mentioned above. The first period was with the passage inland of the small cyclonic storm on the 1st. This storm gave an average rainfall of 7.8 inches to the Noakholly district, to Backergunge 4.8 inches, to Chittagong 2.5 inches, and to Comillah 1.8 inches. The average rainfall received by East Bengal on the 1st instant was 2.2 inches, and in addition a few isolated showers were received at some of the eastern stations of South-West Bengal and in North Bengal. A few showers were again received on the 2nd instant at some of the stations in East Bengal and at one station in South-West Bengal. The next period during which any rain fell in Bengal was from the 11th to the 14th, where, as explained above, the barometer steadily fell for some days and caused the formation of clouds which resulted in the fall of slight showers of rain in East Bengal and in Orissa. Again on the 27th a slight shower was reported from Darjeeling, and on the 28th and 29th a few drops of rain fell at Kalimpong in the Darjeeling district. With these exceptions, the latter being of course very trifling, no rain whatever has been received in Bengal during November.

The rainfall has thus been very much below the average in all districts except East Bengal, where there has been a decided excess. East Bengal has received nearly three times its normal fall, North Bengal a quarter of the normal fall, South-West Bengal a sixth, and Orissa only a fortieth of the normal fall, while North and South Behar and Chutia Nagpur have received absolutely no rain.

The following table gives the summary of the temperature and rainfall data of each of the seven meteorological divisions of the Province for the month of November 1884:—

METEOROLOGICAL DIVISIONS.	TEMPERATURE.						RAINFALL.							
	Highest observed during month.	Lowest observed during month.	Averages for month.			Average mean of month above or below normal mean of month.	Of month.			Rainy days.			Since 15th May.	
			Of highest of each day.	Of lowest of each day.	Of mean for each day.		Average.	Normal average.	Variation.	Average number in month.	Normal average number in month.	Variation.	Average.	Normal average.
Orissa	85.9	59.5	81.0	62.0	71.5	-5.1	0.03	1.27	-1.24	0.5	1.6	-1.3	81.70	66.09
South-West Bengal	86.5	52.2	80.7	60.7	70.7	-2.5	0.30	0.37	-0.07	0.2	1.0	-0.8	44.81	51.10
East Bengal	87.5	58.0	80.8	63.5	71.9	-2.4	2.20	0.83	+1.44	1.5	1.5	0	65.40	75.46
North Bengal	85.3	40.7	80.8	56.8	68.8	-	0.05	0.20	-0.15	0.1	0.6	-0.4	53.17	73.44
North Behar	84.5	46.8	72.6	55.3	67.4	-4.2	Nil	0.10	-0.10	0.0	0.3	-0.3	30.10	47.13
South Behar	87.0	45.1	79.0	58.0	67.5	-2.6	Nil	0.23	-0.23	0.0	0.5	-0.5	30.37	43.53
Chutia Nagpur	80.8	46.4	74.6	53.2	63.9	-2.8	Nil	0.35	-0.35	0.0	1.2	-1.2	30.40	47.31

\* Chyabasa not included.

METEOROLOGICAL OFFICE, BENGAL,

The 15th December 1884.

ALEXANDER PEDLER,

Offg. Meteorological Reporter to the Govt. of Bengal.

## Meteorological Report of the Province of Ben

METEOROLOGICAL DISTRICT.	DISTRICT.	Representative station.	STATION OBSERVATIONS.														Average humidity at 10 A. M.	Average cloud amount at 10 A. M. for week.
			AIR PRESSURE.			WIND.		TEMPERATURE.										
			Mean barometric height, 10 A. M.	Mean reduced to sea-level.	Variation from mean.	Prevailing direction.	Mean wind velocity.	Highest during week.	Lowest during week.	Mean maximum temperature.	Mean minimum temperature of week.	Mean daily temperature.	Variation from normal mean of week.	Mean 10 A. M. temperature.				
SOUTH WEST BENGAL.	Poorne	Gopalpur	30.145	30.145	—	NNW	27.4	74.7	55.0	78.6	55.1	64.3	—	60.0	67	2.0		
	Palae Point	Palae Point	30.135	30.157	+0.022	NE	113	77.4	48.0	75.2	51.1	63.4	—1.3	63.4	63	0.7		
	Outlook	Outlook	30.074	30.102	+0.028	Calm	17	81.8	51.9	60.7	58.8	67.3	—4.4	71.9	53	1.0		
	Halsore	Halsore	30.113	30.174	—	NNE	51	77.8	47.4	77.1	50.0	62.0	—	68.2	57	1.0		
SOUTH WEST BENGAL.	South-West Midnapore	Saugor Island	30.121	30.148	+0.027	N	131	75.2	55.4	74.1	55.4	64.3	—3.1	68.5	71	1.4		
	South 24 Pargannas	Midnapore	30.011	30.108	—	N	90.1	78.3	46.7	75.0	51.0	64.3	—	70.4	53	2.3		
	24 Pargannas	Calcutta	30.130	30.132	+0.002	N & NNW	33	75.0	52.8	75.8	53.3	63.5	—2.9	63.1	61	0.7		
	Howrah	Howrah	30.082	30.165	+0.083	SW	44.1	77.4	63.3	75.8	54.4	65.6	—2.7	63.7	61	1.4		
	Hooghly	Hooghly	30.082	30.165	+0.083	SW	44.1	77.4	63.3	75.8	54.4	65.6	—2.7	63.7	61	1.4		
	Burdwan	Burdwan	30.082	30.165	+0.083	SW	44.1	77.4	63.3	75.8	54.4	65.6	—2.7	63.7	61	1.4		
	Bankura	Bankura	30.082	30.165	+0.083	SW	44.1	77.4	63.3	75.8	54.4	65.6	—2.7	63.7	61	1.4		
	Hooghly	Hooghly	30.082	30.165	+0.083	SW	44.1	77.4	63.3	75.8	54.4	65.6	—2.7	63.7	61	1.4		
	West Burdwan	West Burdwan	30.082	30.165	+0.083	SW	44.1	77.4	63.3	75.8	54.4	65.6	—2.7	63.7	61	1.4		
	Moohamedabad	Moohamedabad	30.082	30.165	+0.083	SW	44.1	77.4	63.3	75.8	54.4	65.6	—2.7	63.7	61	1.4		
	Nuddea	Nuddea	30.082	30.165	+0.083	SW	44.1	77.4	63.3	75.8	54.4	65.6	—2.7	63.7	61	1.4		
	Jessore	Jessore	30.101	30.135	+0.034	NW	48	78.2	51.5	77.4	53.4	65.4	—2.0	71.5	62	1.3		
SOUTH WEST BENGAL.	Khosla	Khosla	30.027	30.120	+0.093	NE	34	61.1	52.7	77.0	50.9	60.6	—3.2	70.3	78	0.6		
	Chittagong	Chittagong	30.027	30.120	+0.093	NE	34	61.1	52.7	77.0	50.9	60.6	—3.2	70.3	78	0.6		
	Chittagong Hill Tracts	Demasiri	30.064	30.064	—	—	—	—	—	—	—	—	—	—	—	—		
	Backergunge	Backergunge	30.064	30.064	—	—	—	—	—	—	—	—	—	—	—	—		
	Noakhali	Noakhali	30.064	30.064	—	—	—	—	—	—	—	—	—	—	—	—		
	Faridpur	Faridpur	30.064	30.064	—	—	—	—	—	—	—	—	—	—	—	—		
	Dacca	Dacca	30.101	30.123	+0.022	N	17	78.8	54.1	77.6	54.3	66.1	—	72.3	66	0.3		
	Comilla	Comilla	30.082	30.119	—	NW	15.0	81.4	51.1	70.0	52.4	65.7	—	71.4	69	0		
	Mymensingh	Mymensingh	30.082	30.119	—	NNE	59	78.0	45.1	73.0	49.7	63.9	—	74.0	59	2.4		
	Sherpur	Sherpur	30.067	30.135	—	N	25.8	77.0	59.1	75.0	52.2	64.1	—	63.0	71	1.7		
	Bogra and Pabna	Bogra	30.064	30.130	—	Calm	16.6	77.6	51.2	75.0	57.4	67.2	—	63.1	67	0.7		
	Rajshahi	Rajshahi	30.064	30.130	—	NNW, NNE	23.6	72.1	47.7	70.6	49.4	60.0	—	70.7	59	0.6		
SOUTH WEST BENGAL.	Dinapore	Dinapore	30.001	30.129	—	NNE	60.3	77.6	48.3	77.2	49.3	63.3	—	68.9	63	0		
	Rangpur	Rangpur	30.018	30.148	—	NE	50	77.2	47.0	70.7	49.8	63.2	—	69.0	60	7.4		
	Jalpaiguri	Jalpaiguri	29.855	30.156	—	S & SSE	53.8	78.1	49.1	77.3	51.2	64.3	—	72.4	70	0.6		
	Cooch Behar	Cooch Behar	29.855	30.156	—	S & SSE	53.8	78.1	49.1	77.3	51.2	64.3	—	72.4	70	0.6		
	Darjeeling Hill District	Darjeeling	23.114	—	—	Calm & E	20.7	52.9	33.1	51.8	33.3	43.6	—	47.2	51	0		
	Purnea	Purnea	30.020	30.103	+0.077	Calm	9.3	78.2	44.9	75.3	49.7	62.5	—2.2	63.6	63	0.1		
	North Bhawalpur	North Bhawalpur	30.014	30.101	+0.087	WSW	40	74.0	61.2	74.5	53.9	63.7	—1.6	65.7	69	0		
	Moohamedabad	Moohamedabad	30.029	30.103	—	NW	57.0	75.5	42.1	75.8	43.3	60.0	—	66.0	60	0		
	Darbhanga	Darbhanga	30.029	30.103	—	NW	57.0	75.5	42.1	75.8	43.3	60.0	—	66.0	60	0		
	Chhapra	Chhapra	30.029	30.103	—	NW	57.0	75.5	42.1	75.8	43.3	60.0	—	66.0	60	0		
	Baran	Baran	30.029	30.103	—	NW	57.0	75.5	42.1	75.8	43.3	60.0	—	66.0	60	0		
	Dehri	Dehri	30.029	30.103	—	SSW	139.7	74.0	50.0	75.1	51.3	62.2	—	64.4	59	0		
SOUTH WEST BENGAL.	Buxar	Buxar	30.027	30.181	—	WNW	57.0	74.0	45.4	75.3	45.0	60.0	—	67.4	49	0		
	Arrah	Arrah	30.043	30.130	—	WNW	12.8	75.3	45.0	75.5	45.9	59.8	—	65.0	53	0		
	Gya	Gya	30.079	30.174	—	Calm	15.9	75.8	42.1	74.0	44.3	59.4	—5.3	67.0	45	2.1		
	Patna	Patna	30.016	30.110	+0.094	W	40.1	74.3	47.0	75.0	50.1	61.0	—1.8	65.2	60	0.3		
	South Bhagalpur	South Bhagalpur	30.002	30.162	—	W.NW	28	75.0	46.0	74.0	50.0	62.0	—	67.8	51	4.1		
	Monohar	Monohar	30.002	30.162	—	W.NW	28	75.0	46.0	74.0	50.0	62.0	—	67.8	51	4.1		
	South Pargannas	South Pargannas	29.840	—	—	NNW	54.7	74.0	47.0	74.7	51.0	62.0	—	65.4	74	0		
	Barisal	Barisal	30.080	30.174	+0.094	NNE	35.2	73.0	40.3	70.4	45.8	59.3	—2.5	64.0	66	0.7		
	Barisal	Barisal	30.080	30.174	+0.094	NNE	35.2	73.0	40.3	70.4	45.8	59.3	—2.5	64.0	66	0.7		
	Barisal	Barisal	30.080	30.174	+0.094	NNE	35.2	73.0	40.3	70.4	45.8	59.3	—2.5	64.0	66	0.7		
	Barisal	Barisal	30.080	30.174	+0.094	NNE	35.2	73.0	40.3	70.4	45.8	59.3	—2.5	64.0	66	0.7		
	Barisal	Barisal	30.080	30.174	+0.094	NNE	35.2	73.0	40.3	70.4	45.8	59.3	—2.5	64.0	66	0.7		

\* Mean for six days.

**Explanation.**—**Summary.**—The normal means of air pressure and temperature are the arithmetical averages or means of the readings during the year. The humidity of the atmosphere is expressed as a percentage, saturated air being represented by 100. A clear sky is denoted by 0 and an overcast by 100. The normal means of rainfall are the arithmetical means or averages of the rainfall in that district determined from the returns sent in by the sub-divisions of the district (4 & 5), the total rainfall at the sub-divisional stations in the district being divided by the number of stations. A rain

for the week ending Friday, the 12th of December 1884.

Rainfall of week at observing station.	DISTRICT OBSERVATIONS.										Representative station.	DISTRICT.	METEOROLOGICAL DIVISION.
	RAINFALL.												
	Of week.		Since 1st of month.			Since 15th May.			Average number of rainy days.	Normal number of rainy days.			
	Mean for district.	Normal mean.	Mean for district.	Normal mean.	Variation.	Mean for district.	Normal mean.	Variation.					
Nil	—	—	—	—	—	—	—	—	—	—	Gopalpore	Pooree	ORISSA.
Nil	Nil	0.38	Nil	0.53	-0.15	49.40	57.07	-7.67	0.0	0.0	False Point	...	
Nil	Nil	0.31	Nil	0.44	-0.13	47.03	52.05	-5.02	0.0	0.0	Cuttack	Cuttack	
Nil	Nil	0.18	Nil	0.23	-0.05	56.08	53.57	+2.51	0.0	0.3	Balasore	Balasore	
Nil	Nil	0.13	Nil	0.21	-0.08	69.08	61.91	+7.17	0.0	0.3	Saukar Island	South-West Midnapore	SOUTH-WEST BENGAL.
Nil	Nil	0.07	Nil	0.20	-0.13	43.01	50.01	-7.00	0.0	0.4	Midnapore	Midnapore	
Nil	Nil	0.11	Nil	0.27	-0.16	48.03	51.05	-3.02	0.0	0.4	Calcutta	Howrah	
Nil	Nil	0.05	Nil	0.15	-0.10	35.02	46.33	-11.31	0.0	0.2	Burdwan	Hooghly	
Nil	Nil	0.03	Nil	0.19	-0.16	38.94	51.16	-12.22	0.0	0.3	Ranigunge	Burdwan	SOUTH-WEST BENGAL.
Nil	Nil	0.08	Nil	0.16	-0.08	38.42	49.74	-11.32	0.0	0.4	Hochampore	Bankura	
Nil	Nil	0.02	Nil	0.14	-0.12	38.48	49.40	-10.92	0.0	0.1	...	Hoerthoom	
Nil	Nil	0.05	Nil	0.20	-0.15	53.11	53.18	-0.07	0.0	0.3	Jessore	West Burdwan	
Nil	Nil	0.20	Nil	0.55	-0.35	108.64	112.25	-3.61	0.0	0.4	Chittagong	Moorshedabad	SOUTH BENGAL.
Nil	Nil	0.20	Nil	0.64	-0.44	62.66	38.37	+24.29	0.0	0.4	Dumagiri	Jessore	
Nil	Nil	0.17	Nil	0.40	-0.23	83.11	76.74	+6.37	0.0	0.4	Barrisal	Khoolna	
Nil	Nil	0.20	Nil	0.59	-0.39	95.44	110.94	-15.50	0.0	0.5	Noakholly	Chittagong	
Nil	Nil	0.02	Nil	0.12	-0.10	43.88	56.02	-12.14	0.0	0.2	Furroadpore	Chittagong Hill Tracts	SOUTH BENGAL.
Nil	Nil	0.09	Nil	0.21	-0.12	47.81	58.83	-11.02	0.0	0.4	Dacca	Backergunge	
Nil	Nil	0.18	Nil	0.30	-0.12	64.15	71.80	-7.65	0.0	0.0	Commilla	Noakholly	
Nil	Nil	0.07	Nil	0.16	-0.09	68.04	68.65	-0.61	0.0	0.4	Mymensingh	Furroadpore	
Nil	Nil	0.04	Nil	0.15	-0.11	57.75	68.39	-10.64	0.0	0.3	Sonargaon	Dacca	SOUTH BENGAL.
Nil	Nil	0.03	Nil	0.13	-0.10	36.00	53.24	-17.24	0.0	0.2	Rampore Beaulah	Comilla	
Nil	Nil	0.03	Nil	0.13	-0.10	38.74	50.66	-11.92	0.0	0.2	Dinapore	Mymensingh	
Nil	Nil	0.08	Nil	0.11	-0.03	49.79	70.51	-20.72	0.0	0.1	Bungpore	Bogra and Pabna	
Nil	Nil	0.14	Nil	0.14	-0.00	69.23	113.08	-43.85	0.0	0.2	Jalpigore	Rajshahye	SOUTH BENGAL.
Nil	Nil	0.07	Nil	0.09	-0.02	113.01	159.16	-46.15	0.0	0.1	Darjeeling	Dinapore	
Nil	Nil	0.06	Nil	0.06	-0.00	40.16	67.05	-26.89	0.0	0.2	Purneah	Bungpore	
Nil	Nil	0.01	Nil	0.03	-0.02	34.69	43.15	-8.46	0.0	0.1	Moulapore	Jalpigore	
Nil	Nil	0.01	Nil	0.03	-0.02	41.79	63.65	-21.86	0.0	0.1	Durbhunga	Cooch Behar	SOUTH BENGAL.
Nil	Nil	0.01	Nil	0.01	-0.00	30.62	40.78	-10.16	0.0	0.1	Motihari	Darjeeling Hill Districts	
Nil	Nil	0.01	Nil	0.01	-0.00	29.10	30.07	-0.97	0.0	0.1	Chupra	Purneah	
Nil	Nil	0.01	Nil	0.01	-0.00	29.10	30.07	-0.97	0.0	0.1	Delree	North Bhagalpore	
Nil	Nil	0.01	Nil	0.01	-0.00	27.74	30.26	-2.52	0.0	0.0	Buxar	Moulapore	SOUTH BENGAL.
Nil	Nil	0.01	Nil	0.01	-0.00	29.00	40.34	-11.34	0.0	0.1	Arrah	Durbhunga	
Nil	Nil	0.01	Nil	0.01	-0.00	31.05	41.90	-10.85	0.0	0.1	Gya	Obuaparna	
Nil	Nil	0.01	Nil	0.01	-0.00	33.46	48.67	-15.21	0.0	0.1	Bankipore	Saran	
Nil	Nil	0.03	Nil	0.07	-0.04	34.10	46.50	-12.40	0.0	0.2	Bhagalpore	Shahabad	SOUTH BENGAL.
Nil	Nil	0.05	Nil	0.11	-0.06	36.96	47.29	-10.33	0.0	0.3	Doonka	Gya	
Nil	Nil	0.11	Nil	0.24	-0.13	44.07	51.29	-7.22	0.0	0.6	Hazaribagh	Patna	
Nil	Nil	0.05	Nil	0.11	-0.06	36.96	47.29	-10.33	0.0	0.3	Raneesow	South Bhagalpore	
Nil	Nil	0.11	Nil	0.24	-0.13	44.07	51.29	-7.22	0.0	0.6	Onyehassa	Monghyr	SOUTH BENGAL.
Nil	Nil	0.05	Nil	0.11	-0.06	36.96	47.29	-10.33	0.0	0.3	...	Southal Pargunnahs	
Nil	Nil	0.05	Nil	0.11	-0.06	36.96	47.29	-10.33	0.0	0.3	...	Hazaribagh	
Nil	Nil	0.05	Nil	0.11	-0.06	36.96	47.29	-10.33	0.0	0.3	...	Lebardung	

period for the past ten years. The variations are negative when the mean for the week is less than the corresponding normal mean, and positive when greater. The number denoting cloud amount represents the part of the sky covered, the whole sky being denoted by 10. Under the head "district observations" for the period in question during the past 12 years. The means for the "district" are the numerical averages of the rainfall returns received day by day on which at least an hundredth of an inch fell.



## Statement of Rainfall in Bengal for the week ending Friday (6 p.m.), the 12th December 1884.

Meteorological Division.	District.	Station.	RAINFALL.						TOTAL.		Total rain-fall from 1st to 12th December 1884.	Average total rain-fall from 1st to 12th December.	Total rain-fall since 10th May 1884.	Average rainfall from 10th May to date.
			Saturday, 6th December.	Sunday, 7th December.	Monday, 8th December.	Tuesday, 9th December.	Wednesday, 10th December.	Thursday, 11th December.	Friday, 12th December.	Number of rainy days.				
CHINA	Pooree	Pooree	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	58.93	58.90
		Kharosh	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	50.17	50.07
		Banpur	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	57.01	57.01
		False Point	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	51.94	51.94
	Cutack	Hookitola	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	56.70	56.70
		Jagatsingpore	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	51.40	51.40
		Barki	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	45.12	45.12
		Untack	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	50.03	50.03
	Balasore	Kemirapara	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	40.00	40.00
		Jajpore	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	41.93	41.93
		Chandali	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	50.00	50.00
		Ithunduck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	50.00	50.00
SOUTH-WEST RURAL.	Midnapore	Norah	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	51.14	51.14
		Palasore	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	45.37	45.37
		Jeliasore	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	57.00	57.00
		Baripodah	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	50.00	50.00
	Diamond Bar	Contai	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	50.85	50.85
		Saugor Island	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	50.00	50.00
		Tamluk	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	50.00	50.00
		Midnapore	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	47.23	47.23
	Diamond Bar	Chital	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	50.00	50.00
		Diamond Bar	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	50.00	50.00
		Alipore Jail	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	50.00	50.00
		Barrackpore	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	50.00	50.00
	Howrah	Dum-Dum	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	50.00	50.00
		Baran	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	50.00	50.00
		Museerhat	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	50.00	50.00
		Howrah	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	50.00	50.00
	Booghy	Booghy	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	50.00	50.00
		Serampore	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	50.00	50.00
		Booghy	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	50.00	50.00
		Jehanabad	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	50.00	50.00
	Burdwan	Culina	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	50.00	50.00
		Burdwan	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	50.00	50.00
		Culina	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	50.00	50.00
		Banagunge	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	50.00	50.00
	Sankora	Sankora	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	50.00	50.00
		Inda	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	50.00	50.00
		Bahenpore	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	50.00	50.00
		Kotulpur	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	50.00	50.00
	Beerbhoom	Beerbhoom	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	50.00	50.00
		Beerbhoom	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	50.00	50.00
		Beerbhoom	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	50.00	50.00
		Beerbhoom	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	50.00	50.00
	Nudera	Nudera	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	50.00	50.00
		Nudera	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	50.00	50.00
		Nudera	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	50.00	50.00
		Nudera	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	50.00	50.00
	Kheola	Kheola	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	50.00	50.00
		Kheola	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	50.00	50.00
		Kheola	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	50.00	50.00
		Kheola	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	50.00	50.00
	Jansore	Jansore	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	50.00	50.00
		Jansore	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	50.00	50.00
		Jansore	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	50.00	50.00
		Jansore	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	50.00	50.00
	Moorshedabad	Moorshedabad	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	50.00	50.00
		Moorshedabad	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	50.00	50.00
		Moorshedabad	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	50.00	50.00
		Moorshedabad	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	50.00	50.00
BANGAL	Cox's Bazar	Cox's Bazar	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	50.00	50.00
		Chittagong	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	50.00	50.00
		Chittagong	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	50.00	50.00
		Chittagong	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	50.00	50.00
	Jatiganga Hill Tracts.	Jatiganga	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	50.00	50.00
		Jatiganga	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	50.00	50.00
		Jatiganga	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	50.00	50.00
		Jatiganga	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	50.00	50.00
	Bachergunge	Bachergunge	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	50.00	50.00
		Bachergunge	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	50.00	50.00
		Bachergunge	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	50.00	50.00
		Bachergunge	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	50.00	50.00
	Nankhally	Nankhally	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	50.00	50.00
		Nankhally	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	50.00	50.00
		Nankhally	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	50.00	50.00
		Nankhally	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	50.00	50.00
	Porcedpore	Porcedpore	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	50.00	50.00
		Porcedpore	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	50.00	50.00
		Porcedpore	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	50.00	50.00
		Porcedpore	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	50.00	50.00
	Dacca	Dacca	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	50.00	50.00
		Dacca	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	50.00	50.00
		Dacca	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	50.00	50.00
		Dacca	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	50.00	50.00
	Gomilla	Gomilla	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	50.00	50.00
		Gomilla	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	50.00	50.00
		Gomilla	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	50.00	50.00
Mymensingh	Kishoreganj	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	50.00	50.00	
	Mymensingh	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0					

## Statement of Rainfall in Bengal for the week ending Friday (6 p.m.), the 12th December 1884—concluded.

Meteorological division.	District.	Station.	RAINFALL.							TOTAL.		Total rainfall from 1st to 12th December 1884.	Average total rainfall from 1st to 12th December.	Total rainfall since 15th May 1884.	Average rainfall from 15th May to date.
			Saturday, 6th December.	Sunday, 7th December.	Monday, 8th December.	Tuesday, 9th December.	Wednesday, 10th December.	Thursday, 11th December.	Friday, 12th December.	Number of rainy days.	of Rainfall week.				
NORTH BENGAL.	Pubna	Pubna	...	...	...	...	...	...	...	NI	NI	NI	0.70	42.34	54.00
		Beraungpore	...	...	...	...	...	...	...	NI	NI	NI	0.10	40.45	53.40
	Bogra	Sherpore	...	...	...	...	...	...	...	NI	NI	NI	0.20	37.23	51.28
		Nowshilla	...	...	...	...	...	...	...	NI	NI	NI	0.15	36.10	50.20
		Bogra	...	...	...	...	...	...	...	NI	NI	NI	0.00	37.08	51.23
		Panchibibi	...	...	...	...	...	...	...	NI	NI	NI	0.22	39.97	53.40
	Rajshahi	Banlesh	...	...	...	...	...	...	...	NI	NI	NI	0.11	33.00	53.05
		Natore	...	...	...	...	...	...	...	NI	NI	NI	0.13	36.10	50.64
	Maidah	Nawong	...	...	...	...	...	...	...	NI	NI	NI	?	45.38	?
		Maidah	...	...	...	...	...	...	...	NI	NI	NI	0.10	35.61	50.60
	Dinagopore	Mohadachpore	...	...	...	...	...	...	...	NI	NI	NI	0.24	33.08	53.08
		Churnison	...	...	...	...	...	...	...	NI	NI	NI	0.23	44.01	49.88
		Raigunge	...	...	...	...	...	...	...	NI	NI	NI	0.17	42.89	54.28
		Dinagopore	...	...	...	...	...	...	...	NI	NI	NI	0.07	34.05	53.10
	Rangpur	Balorghat	...	...	...	...	...	...	...	NI	NI	NI	?	37.72	?
		Bhawanigunge (Gyabanda)	...	...	...	...	...	...	...	NI	NI	NI	0.13	43.37	52.33
	Jalpigore	Rangpur	...	...	...	...	...	...	...	NI	NI	NI	0.07	35.67	54.33
		Kurigram	...	...	...	...	...	...	...	NI	NI	NI	0.00	48.27	54.54
		Bogdora	...	...	...	...	...	...	...	NI	NI	NI	0.20	46.09	50.03
		(Niphamari) Jalpigore	...	...	...	...	...	...	...	NI	NI	NI	0.06	101.28	116.12
	Cooch Behar	Dinhatia	...	...	...	...	...	...	...	NI	NI	NI	0.11	34.33	50.81
		Cooch Behar	...	...	...	...	...	...	...	NI	NI	NI	0.08	110.03	118.44
		Mickligunge	...	...	...	...	...	...	...	NI	NI	NI	0.29	34.74	110.42
		Matabhanga	...	...	...	...	...	...	...	NI	NI	NI	0.10	36.05	120.81
	Darjeeling Hill.	Buxa	...	...	...	...	...	...	...	NI	NI	NI	0.05	131.00	140.17
		Siliguri	...	...	...	...	...	...	...	NI	NI	NI	?	50.43	?
		Darjeeling	...	...	...	...	...	...	...	NI	NI	NI	0.13	?	108.08
		Kailimpong	0.47	...	...	...	...	...	...	NI	NI	NI	?	34.53	?
NORTH BENGAL.	Purneah	Kishengunge	...	...	...	...	...	...	...	NI	NI	NI	0.07	53.76	57.80
		Armarah	...	...	...	...	...	...	...	NI	NI	NI	0.05	51.02	52.78
	North Bhagalpore.	Purneah	...	...	...	...	...	...	...	NI	NI	NI	0.19	40.38	50.78
		Maddapore	...	...	...	...	...	...	...	NI	NI	NI	0.01	37.68	49.36
	Imrubhanga	Boopool	...	...	...	...	...	...	...	NI	NI	NI	0.04	20.29	44.32
		Tajpore	...	...	...	...	...	...	...	NI	NI	NI	0.01	33.77	46.24
	Mouffertpore	Barbhanga	...	...	...	...	...	...	...	NI	NI	NI	0.02	30.33	44.24
		Madhubani	...	...	...	...	...	...	...	NI	NI	NI	0.01	40.63	43.90
	Obamparun	Bitamarhi	...	...	...	...	...	...	...	NI	NI	NI	0.02	34.93	39.76
		Mouffertpore	...	...	...	...	...	...	...	NI	NI	NI	0.01	32.43	44.48
	Saran	Bajipore	...	...	...	...	...	...	...	NI	NI	NI	0.05	34.08	61.15
		Motihari	...	...	...	...	...	...	...	NI	NI	NI	0.03	41.51	41.18
NORTH BENGAL.	Gopalgange	Bettiah	...	...	...	...	...	...	...	NI	NI	NI	0.02	44.23	47.40
		Gopalgange	...	...	...	...	...	...	...	NI	NI	NI	NI	30.30	45.70
	Shahabad	Sewan	...	...	...	...	...	...	...	NI	NI	NI	0.01	28.76	43.33
		Chuprah	...	...	...	...	...	...	...	NI	NI	NI	0.01	38.29	43.33
	Gya	Buzar	...	...	...	...	...	...	...	NI	NI	NI	NI	18.79	37.43
		Denree	...	...	...	...	...	...	...	NI	NI	NI	?	31.27	?
		Bhuuoonah	...	...	...	...	...	...	...	NI	NI	NI	NI	25.04	40.69
		Bamouan	...	...	...	...	...	...	...	NI	NI	NI	0.01	34.04	40.16
	Patna	Arman	...	...	...	...	...	...	...	NI	NI	NI	0.02	24.21	39.00
		Aurangabad	...	...	...	...	...	...	...	NI	NI	NI	NI	38.23	40.11
		Gya	...	...	...	...	...	...	...	NI	NI	NI	NI	3.98	40.05
		Nowadah	...	...	...	...	...	...	...	NI	NI	NI	0.01	22.15	35.88
	Monghyr	Jehanabad	...	...	...	...	...	...	...	NI	NI	NI	NI	17.20	36.70
		Patna	...	...	...	...	...	...	...	NI	NI	NI	0.01	20.64	40.68
		Dhampore	...	...	...	...	...	...	...	NI	NI	NI	0.01	30.21	39.07
		Dehar	...	...	...	...	...	...	...	NI	NI	NI	0.01	11.05	41.97
NORTH BENGAL.	South Bhagalpore.	Barh	...	...	...	...	...	...	...	NI	NI	NI	NI	31.83	40.83
		Hegomatal	...	...	...	...	...	...	...	NI	NI	NI	0.01	15.30	38.70
	Monghyr	Monghyr	...	...	...	...	...	...	...	NI	NI	NI	NI	31.09	40.10
		Jamui	...	...	...	...	...	...	...	NI	NI	NI	0.01	20.70	41.61
	South Bhagalpore.	Bhagalpore	...	...	...	...	...	...	...	NI	NI	NI	0.03	39.67	40.67
		Barh	...	...	...	...	...	...	...	NI	NI	NI	0.05	26.68	43.60
	Mouffertpore.	Rajmahal	...	...	...	...	...	...	...	NI	NI	NI	0.05	32.47	49.63
		Godda	...	...	...	...	...	...	...	NI	NI	NI	0.10	15.11	40.60
		Patna	...	...	...	...	...	...	...	NI	NI	NI	0.08	33.93	51.94
		Nya Dookka	...	...	...	...	...	...	...	NI	NI	NI	0.10	20.90	40.43
NORTH BENGAL.	Lohardugga	Imrubhanga	...	...	...	...	...	...	...	NI	NI	NI	0.02	31.11	45.05
		Jehanabad	...	...	...	...	...	...	...	NI	NI	NI	0.10	47.13	46.35
	Singhbhum	Chyobasa	...	...	...	...	...	...	...	NI	NI	NI	?	40.44	?
		Lohardugga	...	...	...	...	...	...	...	NI	NI	NI	0.11	40.91	51.02
	Maukchow	Manohi	...	...	...	...	...	...	...	NI	NI	NI	0.00	20.67	41.90
		Lohardugga	...	...	...	...	...	...	...	NI	NI	NI	0.24	44.07	51.20
	Singhbhum	Chyobasa	...	...	...	...	...	...	...	NI	NI	NI	0.14	34.25	40.38
		Lohardugga	...	...	...	...	...	...	...	NI	NI	NI	0.12	30.10	40.45
	Maukchow	Kurulia	...	...	...	...	...	...	...	NI	NI	NI	?	?	?
		Lohardugga	...	...	...	...	...	...	...	NI	NI	NI	?	?	?

Explanation.— Indicates that no rain has fallen. If the return for any day has not been received, the corresponding space is left blank. If any of the columns are wanting, the corresponding spaces in the total rainfall columns are left blank.

Calcutta, the 15th December 1884.

# SUMMARY OF THE METEOROLOGICAL AND RAINFALL OBSERVATIONS TAKEN IN BENGAL DURING THE WEEK ENDING THE 12TH DECEMBER 1884.

The past week has again been characterized by unusually high pressure and low temperature over the whole Province, while at no single station has any rain been reported. These conditions are similar to those which have obtained in Bengal since the establishment of the present north-east monsoon.

Pressure had been high for the greater part of the previous week, and it increased steadily up to the 7th, when a fall set in, in most cases extending over two or three days, and this was followed by a rebound, which at the close of the week left the barometer higher even than it had been at the beginning of the week. These changes were of course only of the usual oscillatory nature, and were of no practical significance as to alteration of weather conditions. Thus the pressure for the week has been in all districts considerably above the normal. Behar still continues to be an area of relatively excess pressure, and at Durbhunga, the mean excess for the week was 0.101 inch; in other districts the excess varied from 0.078 inch at Calcutta to 0.041 inch at Saugor Island.

This accumulation of pressure has probably been due to the continuance of the unusually low temperature which has been noticed in the previous weekly reports, and again this week it has to be recorded that in every district temperature has been below the average by amounts varying between 5° and 6° at False Point and Gya to between 1° and 2° at Bankipore and Durbhunga. The average defect of temperature has been greatest in the Orissa Division, where it amounts to nearly 5°; it was 3° and upwards in the South Behar and East Bengal districts, and between 2° and 3° in South-West Bengal, Chutia Nagpur, and North Behar districts. The night temperatures were again particularly low for the time of year, as may be seen from the following table, which gives the normal and actual mean maximum and minimum temperatures at seven stations, and which therefore illustrates clearly the temperature variations of the past week:—

	MAXIMUM DAY TEMPERATURE.			Deficiency.	MINIMUM NIGHT TEMPERATURE.			Deficiency.
	Normal average for week.	Actual average for week.			Normal average for week.	Actual average for week.		
Cuttack ...	82.9	80.7	2.2		60.6	59.8	0.8	
Calcutta ...	77.1	75.8	1.3		59.6	58.3	1.3	
Burdwan ...	78.3	76.6	1.7		58.2	54.4	3.8	
Jessore ...	78.2	77.4	0.8		56.7	53.4	3.3	
Dacca ...	79.2	77.8	1.4		58.6	54.5	4.1	
Patna ...	75.6	73.6	2.0		50.6	50.1	0.5	
Hazaribagh ...	72.7	70.4	2.3		51.5	48.8	2.7	

The following table gives the summary of the temperature and rainfall data of each of the seven meteorological divisions of the Province for the week ending Friday, the 12th December 1884:—

METEOROLOGICAL DIVISIONS.	TEMPERATURE.							RAINFALL.									
	Highest observed during week.	Lowest observed during week.	Averages for week.			Average mean of week above or below normal mean of week.	Of week.			Rainy days.			Since 1st of month.		Since 1st of May.		
			Of highest of each day.	Of lowest of each day.	Of mean for each day.		Average.	Normal average.	Variation.	Average number in week.	Normal average number in week.	Variation.	Average.	Normal average.	Average.	Normal average.	
Orissa	81.3	47.4	74.3	51.5	64.7	-4.0	Nil	0.23	-0.25	0.0	0.4	-0.6	Nil	0.38	51.70	64.45	
South-West Bengal	78.3	48.7	70.3	54.2	65.2	-2.7	Nil	0.06	-0.04	0.0	0.3	-0.3	Nil	0.21	44.51	61.38	
East Bengal	61.4	40.1	77.5	55.2	68.4	-3.0	Nil	0.18	-0.18	0.0	0.4	-0.4	Nil	0.39	65.40	75.97	
North Bengal	78.1	47.6	75.8	51.5	63.7	-	Nil	0.08	-0.08	0.0	0.2	-0.2	Nil	0.14	53.17	74.28	
North Behar	79.2	44.1	75.7	48.5	65.1	-2.1	Nil	0.03	-0.03	0.0	0.1	-0.1	Nil	0.03	59.10	67.18	
South Behar	76.2	42.1	72.9	48.6	61.3	-3.3	Nil	0.01	-0.01	0.0	0.1	-0.1	Nil	0.03	50.37	63.25	
Chutia Nagpur	72.0†	44.3†	60.1†	49.4†	59.1†	-2.8†	Nil	0.05	-0.05	0.0	0.3	-0.3	Nil	0.10	56.40	67.42	

\* Barisal not included.

† Chyabang not included.

METEOROLOGICAL OFFICE, BENGAL;

ALEXANDER PEDLER,

The 12th December 1884.

Offg. Meteorological Reporter to the Govt. of Bengal.



Results of the Thermometrical Observations taken at the Meteorological Office,  
Chowringhee, from 7th to 13th December 1884.

MONTH.	Date.	TEMPERATURE.				Mean wet bulb.	HYGROMETRY.			Rain.
		Mean.	Maximum.	Range.	Minimum.		Vapour tension.	Dew point.	Humidity.	
		°	°	°	°	°	Inches.	°	%	Inches.
December	7th	66.1	76.9	20.2	55.7	59.9	.416	53.8	65	Nil
"	8th	64.8	78.4	22.5	53.9	57.0	.390	52.1	63	"
"	9th	66.8	75.9	23.6	52.3	53.8	.431	54.8	73	"
"	10th	64.6	76.4	23.1	53.3	60.2	.464	56.7	76	"
"	11th	66.9	76.9	20.0	56.9	62.3	.466	58.8	75	"
"	12th	66.8	77.4	20.5	56.9	62.1	.497	58.8	75	"
"	13th	66.3	77.8	21.9	56.9	61.4	.480	57.8	74	"

The mean temperature of the seven days ... 65.6

The extreme variation of temperature ... 25.5

The maximum temperature ... 77.8

The mean relative humidity ... 73

The total fall of rain from 7th to 13th December 1884 ... Nil

The mean temperature and humidity are obtained by applying to the mean of the 10h, 16h and minimum readings a correction dependent on the range, and derived from the hourly observations at the Surveyor-General's Office, Chowringhee, in past years.

METEOROLOGICAL OFFICE, INDIA;  
Calcutta, the 15th December 1884.

W. L. DALLAS,  
for Meteorological Reporter to the Govt. of India.

## MEMORANDA.

THE principal features in the vital statistics of the first class Municipalities in Bengal for the week ending 20th November 1884, as presented in the statement appended to this memorandum, are the following:—

1. That births were registered in the proportion of 31·6 per 1,000 of the living and deaths at 42·3 per 1,000, as opposed to 29·4 and 39·6 per 1,000, respectively, during the preceding week ending 22nd November, exhibiting a satisfactory improvement in the record of both events.

2. That the highest proportions of births and deaths were returned by the following Municipalities:—

Births.			Deaths.		
		Ratio per mille.			Ratio per mille.
Mozufferpore ...	...	53·6	Chittagong ...	...	72·7
Serampore ...	...	51·0	Serampore ...	...	70·6
Monghyr ...	...	50·0	Suburbs of Calcutta ...	...	58·9
Patna ...	...	39·2	Burdwan ...	...	58·4
Gya ...	...	37·6	Jessore ...	...	55·1
Comillah ...	...	34·7	Bhagulpore ...	...	54·2
Burdwan ...	...	33·0	Dacca ...	...	53·1
Naraingunge ...	...	33·2	Ranaghat ...	...	47·9
Dacca ...	...	33·1	Santipore ...	...	47·3
Chupra ...	...	32·8	Utterpara ...	...	47·2
Bhagulpore ...	...	31·7	Hughli ...	...	43·6
Howrah ...	...	30·6	Howrah ...	...	42·4
Kishnaghur ...	...	30·3	Poori ...	...	42·6
Suburbs of Calcutta ...	...	29·6	Beaulah ...	...	42·0
Hughli ...	...	29·5	Kishnaghur ...	...	41·7
			Monghyr ...	...	41·6
			Gya ...	...	38·2
			Naraingunge ...	...	33·2
			Patna ...	...	33·1
			Mozufferpore ...	...	31·8
			Purneah ...	...	31·1

3. That the death-rates from the diseases specified in the table above referred to, as compared with the similar information for the preceding week, were—

			Ratio per mille during the weeks ending—	
			20th November 1884.	22nd November 1884.
Cholera ...	...	...	5·0	3·8
Small-pox ...	...	...	·1	·2
Fever ...	...	...	19·5	18·0
Bowel-complaints ...	...	...	6·0	6·1
Injury ...	...	...	·6	·6
Other causes ...	...	...	10·5	10·3

indicating chiefly, an increase in the death-rates from cholera and fever, especially from the first-named disease.

4. That the greatest suffering from cholera, fever, bowel-complaints and "Other causes" occurred in the undermentioned Municipalities, the other diseases exhibiting no special local severity:—

Cholera.		Fever.		Bowel-complaints.		Other Causes.	
	Ratio per mille.		Ratio per mille.		Ratio per mille.		Ratio per mille.
Chittagong ...	51·8	Jessore ...	55·1	Utterpara ...	37·8	Poori ...	21·4
Serampore ...	41·2	Santipore ...	43·8	Serampore ...	13·7	Dacca ...	20·7
Poori ...	10·7	Burdwan ...	42·7	Beaulah ...	13·1	Hooghly ...	17·4
Suburbs of Calcutta ...	3·7	Ranaghat ...	41·9	Monghyr ...	10·8	Suburbs of Calcutta ...	16·5
Howrah ...	8·4	Bhagulpore ...	30·8			Bhagulpore ...	12·6
Dacca ...	5·2	Kishnaghur ...	30·3			Howrah ...	10·8
		Beaulah ...	26·2			Gya ...	10·2
		Suburbs of Calcutta ...	25·0			Patna ...	10·0
		Purneah ...	24·2				
		Dacca ...	22·7				
		Monghyr ...	22·6				

5. That under the heads of Sex, Class and Age, the mortality of the week is stated to have been distributed as follows:—

According to Sex.		According to Class.		According to Age.	
	Ratio per mille.		Ratio per mille.		Ratio per mille.
Males ...	43·5	Christians ...	26·1	Under 1 year ...	305·8
Females ...	41·0	Hindus ...	42·4	1 and under 5 years ...	57·1
Ratio of male deaths to every 100 female deaths ...	120	Mahomedans ...	42·7	5 " 10 " ...	24·6
		Other classes ...	109·2	10 " 15 " ...	19·9
				16 " 20 " ...	22·0
				20 " 30 " ...	30·1
				30 " 40 " ...	32·6
				40 " 50 " ...	35·0
				50 " 60 " ...	47·0
				60 years and upwards ...	94·3

B. LIDDESDALE, M.D., Deputy Surgeon-General,  
Sanitary Commissioner for Bengal.

The 15th December 1884.

**Table showing the Results of the Registration of Births and Deaths in the First Class Municipalities in Bengal during the week ending 29th November 1884.**

		POPULATION.		BIRTHS.		DISEASES.										SEX.		Ratio of male deaths to every 100 female deaths.									
DISTRICTS.	NAMES OF MUNICIPALITIES.	NUMBER OF--		RATIO PER 1,000 OF POPULATION PER ANNUM.		RATIO PER 1,000 OF POPULATION PER ANNUM.										RATIO PER 1,000 OF POPULATION PER ANNUM.											
		Males.	Females.	Total.	Males.	Females.	Total.	Cholera.	Small-pox.	Pox.	Howel-complaints.	Injury.	Other diseases.	All causes.	Cholera.	Small-pox.	Pox.		Howel-complaints.	Injury.	Other diseases.	All causes.	Ratio of deaths per 1,000 of population per annum in the previous week.	Males.	Females.	Ratio per 1,000 of population per annum.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
Burdwan		15,600	16,017	31,617	15	7	22	25.0	10.5	83.8	914	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Midnapur		16,927	16,835	33,762	11	4	15	17.0	6.2	23.2	275	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Howrah		16,179	17,139	33,318	12	10	22	16.1	13.4	29.5	120	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Saranipore	Saranipore	13,158	12,837	25,995	10	16	26	10.6	31.4	51.0	62	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		3,040	2,464	5,504	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Howrah		60,983	41,659	102,642	24	28	52	10.5	15.8	26.3	181	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Suturias of Calcutta		147,205	104,234	251,439	76	67	143	12.7	13.8	26.5	113	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Kishinagar		15,303	11,214	26,517	8	...	8	13.1	15.1	28.2	106	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Bagmati		4,028	4,555	8,583	1	...	1	6.0	...	6.0	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Saranipore		13,203	13,575	26,778	3	7	10	6.2	12.2	17.5	42	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Jessore		4,000	3,600	7,600	1	1	2	6.1	6.1	12.2	100	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Saranipore		16,705	9,035	25,740	4	3	7	10.5	11.1	21.6	80	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Barisal		8,029	2,947	10,976	1	...	1	6.5	...	6.5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Dacca		42,383	57,879	100,262	21	20	41	12.6	18.6	31.2	70	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Saranipore		7,805	4,056	11,861	5	3	8	20.7	12.4	33.1	165	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Chittagong		13,340	8,708	22,048	6	3	11	14.1	11.7	25.8	128	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cemillah		8,133	4,333	12,466	3	8	11	11.6	21.1	32.7	60	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Pana City		76,702	61,473	138,175	71	50	121	23.0	16.2	39.2	143	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Gya		38,339	37,631	75,970	23	26	49	17.1	20.5	37.6	83	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Arrah		20,004	22,202	42,206	5	3	8	0.0	2.4	2.4	260	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Meerut		25,084	10,538	35,622	20	24	44	24.3	29.2	53.5	89	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Durban		33,774	32,328	66,102	50	13	63	19.7	10.2	29.9	135	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Chugra		27,044	27,225	54,269	24	9	33	23.4	8.9	32.3	263	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Bhagpur		32,640	27,913	60,553	15	20	35	13.0	18.1	31.1	75	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Monab		22,151	27,225	49,376	24	20	44	22.5	13.1	35.6	140	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Larnab		8,463	6,353	14,816	3	3	6	10.4	6.9	17.3	120	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Poor		13,027	11,203	24,230	4	2	6	8.6	4.2	12.8	200	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total		702,670	619,419	1,322,089	433	369	802	17.1	14.5	31.6	117	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

[illegible]

**B. LIDDERDALE, M.D., Deputy Surgeon-General,  
Sanitary Commissioner for Bengal.**

Office of Sanitary Commissioner for Bengal,

The 154A December 1884.



PUBLIC WORKS DEPARTMENT, IRRIGATION BRANCH, BENGAL.  
NUDDEA RIVERS.

Statement showing the total amount of Traffic and Tolls on the Jellinghee River for the month of October 1884.

Number of Boats.	NATURE OF CARGO.	APPROXIMATE		TONNAGE OF BOATS.		Tollage.		
		Weight of cargo.	Value of cargo.	Mounds.	Sons.			
	LOCAL TRAFFIC.	Mds.	Rs.			Rs.	A.	P.
77	Paddy ...	19,975	29,962	37,725	1,347	282	15	0
72	Rice ...	11,450	40,075	21,100	753	158	4	0
16	Wheat ...	6,400	12,800	12,700	453	95	4	0
45	Gram ...	14,125	28,250	27,750	991	208	2	0
59	Pulses and other crops	22,800	45,600	43,025	1,536	322	11	0
2	Fruits and vegetables	500	1,000	1,100	39	8	4	0
84	Salt ...	17,475	48,056	33,300	1,189	333	0	0
2	Oil ...	300	2,400	825	29	8	4	0
1	Sajee ...	50	150	125	4	1	4	0
14	Tobacco ...	4,325	21,625	7,750	276	77	8	0
2	Brass ...	100	4,000	275	9	2	12	0
2	Iron ...	725	5,075	1,500	53	15	0	0
237	Jute ...	95,775	2,39,437	1,85,500	6,625	1,855	0	0
8	Indigo seed ...	625	5,000	1,425	50	10	11	0
19	Linseed ...	7,100	21,300	13,900	496	104	4	0
9	Mustard seed ...	3,475	13,900	6,925	247	51	16	0
19	Ghooting ...	6,250	1,562	10,725	383	26	13	0
66	Steamer ...	.....	.....	.....	.....	152	10	0
2	Bone ...	150	87	375	14	1	14	0
6	Bamboos (3,400 in number)	.....	.....	.....	.....	4	8	0
108	Miscellaneous ...	23,100	1,84,800	45,475	1,624	454	12	0
9	Coal and coke ...	3,525	3,525	6,800	242	34	0	0
27	Firewood ...	575	143	1,225	43	6	2	0
3	Earthware and earthen-pots ...	70	17	200	7	0	4	0
934	Total ...	2,38,870	7,08,714	4,59,725	16,410	4,216	1	0
940	Total of same month last year ...	3,64,585	10,63,557	6,99,775	24,979	5,659	15	0
	MISCELLANEOUS.							
596	Passenger boat ...	.....	.....	.....	.....	205	0	0
178	Empty " ...	.....	.....	1,27,200	4,542	159	0	0
12	Straw ...	4,100	1,025	7,350	262	36	12	0
11	Oil-cake ...	1,650	1,650	3,125	111	31	4	0
11	Gunny ...	2,900	29,000	5,850	208	58	8	0
808	Total ...	8,650	31,675	1,43,625	5,123	490	8	0
1,285	Total of same month last year ...	45,875	3,49,987	3,53,800	12,633	1,439	15	0
1,742	Grand Total ...	2,47,520	7,40,389	6,03,250	21,533	4,706	9	0
2,225	Grand Total of same month last year ...	4,10,460	14,13,544	10,53,575	37,612	7,099	14	0

## MEMORANDUM.

Rs. A. P.

Unrecovered balance on the 1st of the month	.....	.....	.....	.....	.....	4,706	9	0
Amount of tollage for the month	.....	.....	.....	.....	.....	.....	.....	.....
Amount credited in the accounts for the month	.....	.....	.....	.....	.....	4,706	9	0
Balance at the end of the month	.....	.....	.....	.....	.....	4,706	9	0

## PUBLIC WORKS DEPARTMENT, IRRIGATION BRANCH, BENGAL.

## NUDDEA RIVERS.

Statement showing the total amount of Traffic and Tolls on the Matabhanga River for the month of October 1884.

Number of Boats.	NATURE OF CARGO.	APPROXIMATE		TONNAGE OF BOATS.		Tollage.
		Weight of cargo.	Value of cargo.	Maunds.	Tons.	
	LOCAL TRAFFIC.	Mds.	Rs.			Rs. A. P.
87	Paddy ...	20,288	30,432	43,175	1,599	323 13 0
47	Rice ...	9,304	28,092	21,850	809	163 14 0
2	Wheat ...	230	575	1,525	56	11 7 0
28	Gram ...	7,264	14,528	12,750	472	95 10 0
67	Pulses and other crops	31,358	54,876	48,900	1,811	366 12 0
27	Fruits and vegetables...	1,870	1,870	4,150	153	31 2 0
7	Jaggery ...	441	2,646	1,200	44	12 0 0
1	Sugar ...	11	176	375	13	3 12 0
59	Salt ...	16,804	50,412	35,900	1,329	359 0 0
3	Ghee ...	33	990	900	33	9 0 0
25	Oil ...	3,041	39,533	14,350	531	143 8 0
16	Spices ...	2,993	29,930	9,450	350	94 8 0
3	Tobacco ...	250	1,250	675	25	6 12 0
3	Cotton piece-goods (European) ...	186	18,600	1,725	63	17 4 0
1	Brass ...	20	400	100	3	1 0 0
12	Iron ...	1,451	7,255	8,525	315	85 4 0
.....	Cotton ...	10	200	.....	.....	.....
1	Do. twist and yarn (European) ...	25	500	450	16	4 8 0
368	Jute ...	1,49,224	4,47,672	3,08,350	11,420	3,083 8 0
1	Hemp ...	4	12	25	.....	0 4 0
15	Linseed ...	5,782	21,682	11,875	439	89 1 0
3	Mustard-seed ...	1,485	5,940	3,275	121	24 9 0
4	Til seed ...	781	2,733	2,000	74	15 0 0
3	Other oil seeds ...	260	780	600	22	4 8 0
.....	Ghooting lime ...	400	400	.....	.....	.....
1	Ghooting ...	300	150	600	22	1 8 0
1	Portland cement ...	6	15	650	24	6 8 0
1	Sand ...	100	25	225	8	0 4 6
.....	Unwrought timber and piles ...	40	120	.....	.....	0 12 0
2	Beams and burgahs ...	100	400	750	27	7 8 0
17	Coal and coke ...	7,975	2,990	10,125	375	50 10 0
1	Charcoal ...	350	87	825	30	4 2 0
1	Earthware and earthen-pots ...	100	25	250	9	0 5 0
3	Stone plates ...	200	1,000	625	23	6 4 0
810	Total ...	2,62,746	7,66,296	6,46,175	20,216	5,023 13 6
2,301	Total of same month last year.	4,26,630	16,00,228	8,67,100	32,098	10,876 6 6
	MISCELLANEOUS.					
507	Passenger boat ...	.....	.....	.....	.....	160 8 0
593	Empty " ...	.....	.....	.....	.....	1,225 2 0
2	Hay ...	600	600	1,225	45	6 2 0
30	Oil-cake ...	4,825	4,825	11,975	443	119 12 0
2	Mats ...	250	600	525	19	5 4 0
59	Miscellaneous ...	8,224	82,240	30,525	1,130	305 4 0
2	Gunny ...	80	400	275	10	2 12 0
2	Empty steamers and flats	.....	.....	.....	.....	47 8 0
1	Laden ditto ...	1,000	10,000	6,700	248	50 4 0
1,198	Total ...	14,979	98,005	51,225	1,895	1,928 8 0
1,145	Total of same month last year.	23,660	2,34,847	1,02,200	3,784	1,234 9 0
2,008	Grand Total ...	2,77,725	8,64,961	5,97,400	22,111	6,952 5 6
3,446	Grand Total of same month last year.	4,50,290	18,35,075	9,69,300	35,882	12,110 15 6

## MEMORANDUM.

Rs. A. P.

Unrecovered balance on the 1st of the month	.....	.....	.....	.....	.....	.....
Amount of tollage for the month	.....	.....	.....	.....	.....	.....
Total						12,933 14 6
Amount credited in the accounts for the month	.....	.....	.....	.....	.....	12,935 8 3
Balance at the end of the month	.....	.....	.....	.....	.....	136 4 1

## PUBLIC WORKS DEPARTMENT, IRRIGATION BRANCH, BENGAL.

## NUDDEA RIVERS.

Statement showing the total amount of Traffic and Tolls on the Bhagiruthee River at Nuddea Toll Station for the month of October 1884.

Number of Boats.	NATURE OF CARGO.	APPROXIMATE		TONNAGE OF BOATS.		Tollage.		
		Weight of cargo.	Value of cargo.	Maunder.	Tons.			
	LOCAL TRAFFIC.	Mds.	Rs.			Rs.	A.	P.
30	Paddy ...	9,975	14,962	17,450	623	130	14	0
11	Rice ...	2,445	8,557	4,550	162	34	2	0
1	Wheat ...	80	160	150	5	1	2	0
8	Gram ...	4,150	8,300	8,325	297	62	7	0
15	Pulses and other crops	4,450	8,900	8,525	304	63	15	0
5	Jaggery ...	575	2,300	1,325	47	13	4	0
80	Salt ...	24,575	67,581	47,100	1,682	471	0	0
4	Ghee ...	310	9,520	775	27	7	12	0
1	Tobacco ...	175	875	450	16	4	8	0
3	Brass ...	240	9,600	550	16	5	8	0
29	Iron ...	14,775	1,03,425	26,100	932	261	0	0
31	Jute ...	15,125	37,812	28,000	1,000	280	0	0
2	Hides ...	125	1,250	400	14	4	0	0
13	Linseed ...	6,975	20,925	13,425	479	100	11	0
2	Shooting ...	525	181	950	33	2	6	0
5	Flat ...	.....	.....	.....	.....	31	8	0
1	Unwrought timber and piles 3 D.	.....	.....	.....	.....	1	2	0
24	Steamer ...	.....	.....	.....	.....	65	6	0
4	Bone ...	450	112	900	32	4	8	0
2	Bamboos (2,000 in No.)	.....	.....	.....	.....	1	8	0
114	Miscellaneous ...	31,815	2,54,520	61,950	2,212	619	8	0
2	Coal and coke ...	700	700	1,575	56	7	14	0
8	Earthware and earthen-pots ...	775	193	1,225	43	1	8	6
395	Total ...	1,18,270	5,40,823	2,23,725	7,980	2,175	7	6
315	Total of same month last year ...	87,800	3,01,560	1,70,525	6,077	1,596	7	0
	MISCELLANEOUS.							
731	Passenger boat ...	.....	.....	.....	.....	278	4	0
147	Empty " ...	.....	.....	1,70,675	6,309	220	18	6
4	Straw ...	1,200	300	2,475	88	12	6	0
4	Gunny ...	475	4,750	1,225	43	12	4	0
886	Total ...	1,675	5,050	1,80,375	6,440	523	11	6
1,351	Total of same month last year ...	30,600	2,46,756	5,07,325	18,117	1,488	11	0
1,281	Grand Total ...	1,19,945	5,54,873	4,04,100	14,420	2,699	3	0
1,006	Grand Total of same month last year ...	1,18,400	5,48,316	6,77,850	24,194	3,085	2	0

## MEMORANDUM.

	Rs.	A.	P.
Unrecovered balance on the 1st of the month	...	...	...
Amount of tollage for the month	...	...	...
	2,039	3	0
Total	2,039	3	0
Amount credited in the accounts for the month	...	...	...
	1,009	3	6
Balance at the end of the month	...	...	...

## PUBLIC WORKS DEPARTMENT, IRRIGATION BRANCH, BENGAL.

## NUDDEA RIVERS.

Statement showing the total amount of Traffic and Tolls on the Bhagirathes River at Jungypore Toll Station for the month of October 1884.

Number of Boats.	NATURE OF CARGO.	APPROXIMATE		TONNAGE OF BOATS.		Tollage.
		Weight of CARGO.	Value of CARGO.	Mounds.	Tons.	
	LOCAL TRAFFIC.	Mds.	Rs.			Rs. A. P.
3	Rice ...	365	900	750	28	5 10 0
53	Wheat ...	21,115	48,162	40,350	1,480	302 10 0
29	Gram ...	17,710	33,240	30,950	1,135	232 2 0
180	Pulses and other crops	86,796	1,99,352	1,57,375	5,404	1,179 1 6
38	Fruits and vegetables	8,484	8,504	17,175	630	130 2 0
10	Jaggery ...	8,130	3,928	6,975	256	69 12 0
10	Sugar ...	3,034	37,500	6,975	256	69 12 0
6	Salt and khari salt ...	2,028	1,765	8,975	146	39 12 0
4	Ghee ...	278	9,044	1,025	38	10 4 0
20	Tobacco ...	5,764	20,333	13,150	482	131 8 0
4	Brass ...	114	7,400	575	21	5 12 0
17	Silk ...	216	5,979	1,775	65	17 12 0
1	Cotton ...	27	204	200	7	2 0 0
13	Jute ...	2,967	7,751	5,400	198	54 0 0
63	Linseed ...	39,513	1,56,318	69,975	2,639	524 13 0
6	Castor seed ...	4,575	10,175	9,575	351	71 13 0
96	Mustard seed ...	34,291	1,34,259	65,275	1,267	489 9 0
69	Other oilseeds ...	46,001	1,72,535	83,275	3,127	624 9 0
3	Silk piece-goods ...	7	2,900	175	6	1 12 0
2	Ghooting lime ...	300	50	600	22	3 0 0
11	Ghooting ...	790	75	1,325	49	3 5 0
3	Sand ...	300	14	625	23	0 12 6
2	Unwrought timber and rafts.		292			5 13 0
20	Roadstone ...	25,300	2,616	48,000	1,760	120 0 0
6	Coal and coke ...	2,175	1,087	3,975	146	19 14 0
10	Firewood ...	1,675	199	3,100	114	15 8 0
677 & 2 rafts.	Total ...	3,06,845	8,64,562	5,72,550	19,650	4,130 14 0
543	Total of same month last year.	2,06,988	.....	3,83,825	.....	2,755 8 6
	MISCELLANEOUS.					
341	Passenger boat, 579 oars.	.....	.....	.....	.....	144 12 0
175	Empty boat ...	.....	.....	1,08,825	3,990	136 0 6
2	Straw ...	23	18	75	3	0 6 0
1	Gunny ...	144	525	300	11	3 0 0
20	Sajji ...	11,767	13,472	21,925	804	219 4 0
209	Miscellaneous mixed cargo ...	61,184	2,21,493	1,21,750	4,464	1,217 0 0
748	Total ...	73,118	2,35,503	2,52,875	9,272	1,720 6 6
655 & 1 raft.	Total of same month last year.	31,965	.....	1,76,975	.....	915 4 0
1,425 & 2 rafts.	Grand Total ...	3,79,963	11,00,065	8,25,425	29,922	5,851 4 6
1,198 & 1 raft.	Grand Total of same month last year.	2,38,953	.....	5,60,800	.....	3,670 12 6

## MEMORANDUM.

		Rs.	A.	P.
Unrecovered balance on the 1st of the month	...	...	4	2 0
Amount of tollage for the month	...	...	5,851	4 6
	Total	...	5,855	6 6
Amount credited in the accounts for the month	...	...	5,855	6 6
Balance at the end of the month	...	...	...	...





## PUBLIC WORKS DEPARTMENT, BENGAL.

## IRRIGATION BRANCH.

IRRIGATION OPERATIONS FOR THE OFFICIAL YEAR 1884-85.  
*Areas leased for Irrigation up to the end of October 1884.*

CIRCLE.	DISTRICT.	CANAL.	Belt measured full dis- charge.	Average discharge in month.	Dis- charge utilised.	Approxi- mate area irrigated during the year up to the end of the month.	Approxi- mate area under irrigation the year up to the end of the last year.	DETAILS OF AREAS LEASED.										RAINFALL.		REMARKS.
								ANNUAL LEASES.										1884-85.		
								Five years. Muzas, Khurda.	Five years. All crops.	Khur- da.	Rabbee years.	Sugar- cane.	Bhadol years.	Not weather.	Total.	Grand Total.	During month.	Up to end of month.		
Orissa.	Cuttack.	Kendrapara ... Gadgaon ... Pattadakunda ... Hill Level, ... Section I. Taldanda, 1st ... Taldanda, 2nd ... Taldanda, ... Machong ... Hill Level, Sec- tion II. Hill Level, Sec- tion III. Total ...	1,249	37,003	487.31	21,376	11,400	...	31,771	21	2,000	50	...	...	2,000	21,433	...	...	Whole month discharging. 12 days discharging.	
			37,288	68.16	18.18	743	8.8	...	6,770	...	...	...	...	...	...	...	...	...		
			1,045	265.68	57.94	7,231	3,257	...	12,574	...	131	...	...	...	...	...	...	...		
			675	937.08	260.93	12,717	11,202	...	...	...	...	...	...	...	...	...	...	...		
			1,315	223	19	9,213	2,406	...	1,835	...	180	...	...	...	...	...	...	...		
			853	26	20	7,489	2,129	...	...	...	...	...	...	...	...	...	...	...		
			776	131	65	1,327	9,055	...	...	...	...	...	...	...	...	...	...	...		
			747.10	05.82	05.02	1,327	2,270	...	...	...	...	...	...	...	...	...	...	...		
			727.18	31.70	34.70	15,030	3,473	...	...	...	...	...	...	...	...	...	...	...		
			...	...	...	72,241	31,911	...	59,081	21	2,541	162	...	...	...	...	...	...		...
South- Western	Midnapore ... Bachikunda ... Korrah ... Total ...	Total of the corresponding period of last year.	1,411	303	380	60,236	80,579	...	68,415	...	...	...	...	...	...	...	...	...		
			621	101	87	4,961	16,003	...	8,406	...	...	...	...	...	...	...	...	...		
			...	...	...	557	211	...	...	...	...	...	...	...	...	...	...	...		
			...	...	...	64,777	91,013	...	62,037	...	...	...	...	...	...	...	...	...		
			...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
			4,313	2,700	631	16,377	17,823	...	...	...	...	...	...	...	...	...	...	...		
			1,256	87	498	61,174	53,329	...	...	...	...	...	...	...	...	...	...	...		
			1,659	1,600	1,178	1,01,317	90,624	...	41,642	...	42	...	...	...	...	...	...	...		
			1,466	1,110	1,315	1,301	8,000	...	...	...	...	...	...	...	...	...	...	...		
			...	...	...	51,559	83,802	...	18,167	...	...	...	...	...	...	...	...	...		
Sons	Shahabad ... Korah ... Patna and ... Oya ... Total ...	Total of the corresponding period of last year.	...	...	...	2,317.00	1,05,091	...	...	...	...	...	...	...	...	...	...			
			...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
			...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
			...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
			...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
			...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
			...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
			...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
			...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
			...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
Sons	Total of the corresponding period of last year.	Grand Total	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
			...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
			...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
			...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
			...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
			...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
			...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
			...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
			...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
			...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		

The 16th December 1884.

C. W. ODLING,  
Under-Secy. to the Govt. of Bengal.

## EAST INDIAN RAILWAY.

Statement of Goods Traffic in Staples carried during the four weeks ending 25th October 1884, as compared with the same period of 1883.

STAPLES.	1884.		1883.		Increase.		Decrease.	
	Weight.	Freight.	Weight.	Freight.	Weight.	Freight.	Weight.	Freight.
	Mds.	Rs.	Mds.	Rs.	Mds.	Rs.	Mds.	Rs.
ANIMALS, LIVING.	No.							
FOR SALE.								
Horses, ponies, and mules	6	742	118	2,450			112	1,679
Cattle	74	229	234	3,483			480	2,554
Sheep and goats	3,514	2,175	2,168	1,000	1,346	275		
Other kinds								
BORAX	484	244	545	418			441	119
CANES AND RATTANS	30	31	30	62	1	1		
CASHEW (Indian rubber)	5	6	12	8			7	2
CHINESE AND JAPANESE WARE	84	37	22	23	13	14		
COAL AND COKE, UP	2,04,820	1,12,523	2,08,110	1,02,578			2,490	50,080
COAL AND COKE, DOWN	22,62,206	1,74,104	14,57,036	2,48,004			2,24,700	33,000
COTTON, RAW	23,784	17,021	27,089	42,746			13,004	25,123
Twist and yarn (European)	7,580	15,103	7,050	11,310	530	1,874		
Ditto (Indian)	8,541	5,543	7,939	4,336	1,772	1,153		
PIECE GOODS (European)	1,27,641	1,74,323	1,55,243	2,13,043			20,822	38,819
Ditto (Indian)	30,249	22,903	30,089	25,811			830	2,006
ASAFETIDA	154	72	163	70			13	7
DRUGS AND MEDICINES.								
Other sorts, not intoxicating	863	1,200	787	1,105	70	285		
Intoxicating drugs (other than opium, i.e., arsenic, bhanga, ganja, and churus, &c.)	1,151	610	492	234	659	413		
DYEING MATERIALS.								
Indigo	5,733	24,037	22,154	57,965			18,401	33,956
Madder or manila	239	53	30	19	189	34		
Safflower	10	10	105	50			89	40
Turmeric	8,213	11,242	8,170	12,277			62	20
Other kinds	8,100	9,481	10,309	8,234			2,179	1,703
Earthenware and porcelain	473	933	624	954			439	31
DATE, RAW	1,546	469	2,084	646			739	170
FIBROUS PRODUCTS.								
Do., manufactured (gunny bags and cloths)	79,517	29,004	40,132	27,078	3,125	1,035		
Other sorts, raw	1,710	370	1,026	178	684	206		
Ditto, manufactured	1,400	466	1,498	487			88	15
FRUITS & VEGETABLES.								
Cocoanuts	3,559	4,000	3,134	4,539			525	250
All other kinds	26,037	20,037	30,746	35,592			7,909	4,635
Wheat	1,40,832	37,106	4,92,132	1,44,680			2,62,300	1,07,490
Gram and pulses	1,60,184	54,019	1,13,084	29,539	73,100	5,070		
Rice, husked	1,35,902	20,309	2,62,172	67,309			1,16,610	38,000
Do., unhusked	10,651	8,533	17,341	2,633			390	
Other rain and spring crops	1,24,812	20,183	2,30,422	49,843			1,05,610	17,020
Gums and resins	3,410	2,103	3,136	1,936	78	107		
HIDES & SKINS.								
Hides of cattle	53,399	18,302	23,120	10,622	269			
Skins of sheep, goats, and small animals	2,285	4,821	6,000	4,082	2,019	133		
Horns	1,432	224	894	681	449	143		
LAC								
Do. shell	101	61	90	49	11	2		
Do. stick and other kinds	17,727	10,423	12,320	19,809	5,398	6,055		
Do. stick and other kinds	10,170	5,170	10,124	7,840			8,050	1,870
LEATHER								
Leather, unmanufactured	1,331	5,394	1,383	2,702	240	607		
Ditto, manufactured	5,255	5,254	2,774	4,530	361	343		
LIQUORS	13,409	12,523	17,030	14,874			4,431	1,642
METALS AND METALLURGY.								
Brass and copper	20,054	24,604	24,740	28,100			1,795	3,693
Iron	68,076	50,603	70,107	62,303			6,131	11,705
Other metals	30,473	15,453	23,703	15,659	1,707	2,791		
Oil	17,827	11,307	14,754	7,836	6,079	3,473		
Opium	1,403	2,801	727	1,401	682	900		
Paints and colours	1,187	1,015	1,402	1,674			275	
PROVISIONS								
Ghee	10,708	14,608	21,410	20,271			6,442	11,705
Other kinds	1,543	327	3,357	4,072			1,744	3,743
RAILWAY MATERIALS.								
Construction Account	2,60,053	4,824	3,63,030	5,067			40,000	203
Ditto, ditto, Foreign	1,00,000	1,11,869	2,11,001	1,10,675			43,089	4,729
SALT	3,04,033	25,005	3,60,038	35,880	15,950		10,783	0,308
SALTPETRE, &c.								
Saltpetre	24,850	9,790	35,038	10,187			1,235	
Other saltpetre substances	10,120	4,100	11,014	5,703	4,110	1,475		
Mustard and rape	3,10,041	1,11,600	4,38,301	1,38,606			1,28,358	31,076
Til or sinjelly	78,585	24,310	82,015	26,850			3,430	1,620
SEEDS.								
Til or sinjelly	10,850	2,780	8,840	2,276	2,510	510		
Other oil-seeds	65,201	16,501	40,021	19,060	5,580	800		
Indigo seed	3,751	836	841	295	2,910	59		
OTHER SEEDS.								
Other kinds	10,174	5,094	22,114	9,308			11,940	1,870
Silk, raw	935	636	1,334	1,366			649	230
Do., manufactured (European)	139	124	469	223			330	400
Do., ditto (Indian)	7,643	9,980	9,006	7,187			3,936	207
SPICES AND MARBLE.								
Sugar, refined	34,643	20,073	1,10,795	43,012			39,543	15,439
Do., unrefined	20,415	6,092	40,439	12,000			14,054	6,139
Do., Indian	2,201	2,730	2,233	2,233			81	
Do., foreign	300	33	697	178	115			
TOBACCO	16,753	7,201	20,074	13,070			13,130	20,818
WOOD								
Timber	14,351	2,840	27,999	5,308			13,348	2,403
Firewood	12,070	532	16,538	1,127			5,369	505
Wool, raw	308	409	1,273	1,217			977	618
Do., manufactured (European)	621	839	355	416	266	424		
Do., manufactured (Indian)	4,527	4,821	3,074	3,019	853	903		
SHAWLS								
Shawls	1,90,349	1,27,008	2,24,046	1,62,626			25,207	4,300
GOVERNMENT STORES	14,217	24,783	22,210	37,050			8,093	13,178
MINERALS	53,074	12,231	42,230	9,047	11,849	3,194		
Total	43,87,778	19,06,800	35,00,870	20,62,073	1,35,075	35,140	12,08,174	8,01,523

*General Remarks on the fluctuation of principal staples carried over the East Indian Railway  
during four weeks ended 25th October 1884.*

**INCREASES.**

*Gram and Pulses.*—The increase in these staples is due to the scarcity in the Bombay Presidency and in Oudh.

*Shell Lac.*—This is attributable to an improved demand in England.

*Oil.*—Larger indents from the Mofussil in consequence of reduction in the price of imported oil, has caused the increase in this staple.

**DECREASES.**

*Coal.*—The decrease in the upwards coal is due to stoppage of supplies to the R. M. Railway and the indents from other Foreign Railways having been less than last year. The falling off in the downwards coal is accounted for by the dulness of the Calcutta market.

*Cotton.*—The old crop having been exhausted and the new crop being late, caused the decrease in this commodity.

*Piece-goods.*—This decrease is accounted for by the Doorga Poojah and Luckee Poojah festivals having fallen earlier this year than in 1883, and the consequence is that the decrease shown in this month is covered by the increase in the last month ended 27th September 1884.

*Wheat.*—There has been no improvement in this staple, and the falling off is entirely due to absence of demand for export.

*Indigo.*—Want of brisk demand in the Calcutta market is the cause for this decrease.

*Rice (husked and unhusked).*—Due to partial failure of last season's crop owing to deficient rainfall.

*Railway Materials, Foreign.*—Decreased despatches of material to State and other Railways resulted in this decrease.

*Salt.*—An increase in weight attended with a decrease in the earnings may be attributed to the reduced rates for upwards and downwards salt: the latter came into force on the 1st October 1884.

*Seeds.*—The stocks of rape seed having been exhausted and supplies of other seeds much reduced, the prices asked were too high for shippers, hence this decrease.

*Sugar and Jaggree.*—Deficient and irregular rainfall last season injured the sugar-cane crop, and this falling off in the staples was the result.

*Tobacco.*—This is assignable to the demand for this staple being limited owing to the markets being dull.

*Ghee.*—This falling off is attributed to the prices being too high for business to be done at the principal ghee-producing stations.

N. ST. L. CARTER, *Traffic Manager.*

TRAFFIC MANAGER'S OFFICE, JAMALPUR, 9th December 1884.



## Weekly Return of Traffic Receipts on Indian Railways.

## EAST INDIAN RAILWAY.

Approximate Return of Traffic for week ended 5th December 1884 on 1,509½ miles open.

	COACHING TRAFFIC.		MERCHANDISE AND MINERAL TRAFFIC.		Other earnings (estimated).	Total earnings.	TRAFFIC TRAIN-MILES RUN.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A. P.	Mds. s.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for the week	192,284	2,47,506 0 0	21,60,312 20	6,11,216 4 0	18,483 1 0	8,75,176 5 0	62,767	100,880	164,103
Or per mile of railway	127 15 8	163 15 8	14 10 10	404 14 10	12 14 3	570 10 0	41 66	66 88	108 103
For previous 22 weeks of half-year	4,104,743	51,50,988 8 0	4,08,13,901 10	50,78,950 11 3	3,20,844 8 1	1,51,00,632 6 4	1,362,419	1,861,780	3,224,199
Total for 23 weeks	4,297,027	54,07,493 8 0	4,29,64,414 30	1,03,89,238 8 3	3,45,077 4 1	1,53,61,808 12 4	1,425,185	1,962,116	3,387,302
COMPARISON.									
Total for corresponding week of previous year	178,183	2,37,848 11 0	25,80,883 10	7,31,806 14 0	18,802 16 8	9,86,439 0 8	60,868	124,519	185,507
Per mile of railway corresponding week of previous year	117 9 11	157 9 11	16 10 10	464 15 5	12 7 4	655 0 8	40 86	80 85	100 97
Total to corresponding date of previous year	4,513,406	52,78,919 11 2	5,48,74,168 10	1,44,21,900 11 1	3,32,843 2 5	1,60,33,467 8 8	1,456,161	2,680,303	4,136,464

Approximate Statement of gross receipts of the East Indian Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.

RECEIPTS FOR WEEK ENDING 5TH DECEMBER 1883.			RECEIPTS FOR WEEK ENDING 5TH DECEMBER 1884.			TOTAL RECEIPTS FROM 1ST APRIL 1883 TO 5TH DECEMBER 1883.			TOTAL RECEIPTS FROM 1ST APRIL 1884 TO 5TH DECEMBER 1884.			Total increase in 1884.	Total decrease in 1884.
Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked.		
	Rs.	Rs.		Rs.	Rs.		Rs.	Rs.		Rs.	Rs.	Rs.	Rs.
1,509	8,68,403	575	1,509½	8,75,176	580	1,509	8,41,49,937	22,630	1,509½	8,70,09,377	18,529	.....	61,75,000

## EASTERN BENGAL STATE RAILWAY.

Approximate Return of Traffic for week ended 29th November 1884, on 369 miles open, including Calcutta and South-Eastern and Bengal Central Railway mileage.

	COACHING TRAFFIC.		MERCHANDISE AND MINERAL TRAFFIC.		Other earnings (estimated), including steam-boat.	Total earnings.	TRAFFIC TRAIN-MILES RUN.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A. P.	Mds. s.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
A.—Total traffic for the week	84,195	36,581 0 0	3,87,728 4	72,214 0 0	8,747 0 0	1,17,343 0 0	25,791	10,006	35,447
Or per mile of railway	224	101 0 0	1048 2	201 0 0	23 6 0	318 0 0	69 86	27 22	97 08
For previous 21 weeks of half-year	1,758,597	7,07,251 0 0	69,43,933 0	16,34,365 0 0	1,77,610 0 0	25,19,420 0 0	575,536	232,186	807,724
Total for 23 weeks	1,842,820	7,43,832 0 0	73,01,941 0	17,06,579 0 0	1,86,357 0 0	26,36,708 0 0	601,377	242,794	844,171
COMPARISON.									
B.—Total for corresponding week of previous year	61,702	41,418 0 0	3,65,903 9	53,838 0 0	10,856 0 0	1,03,990 0 0	10,246	8,326	18,482
Per mile of railway corresponding period of previous year	164	107 0 0	1,011 0	205 0 0	29 0 0	281 0 0	27 86	22 44	50 30
Total to corresponding date of previous year	1,684,720	7,33,239 0 0	69,60,181 0	13,98,671 0 0	2,31,566 0 0	25,10,594 0 0	515,694	178,952	694,647

A.—Includes receipts of Calcutta and South-Eastern Railway, and 50 per cent. of receipts of Bengal Central Railway, viz. Rs. 5,077 and Rs. 4,340 respectively apportioned over the several heads of traffic.

B.—Includes share of Bengal Central Railway receipts due to Eastern Bengal State Railway for working, viz. Rs. 1,048, and Calcutta and South-Eastern receipts Rs. 645.

## FINANCIAL YEAR.

Approximate Statement of gross receipts of the Eastern Bengal State Railway.

RECEIPTS FOR WEEK ENDING 1ST DECEMBER 1883.			RECEIPTS FOR WEEK ENDING 29TH NOVEMBER 1884.			TOTAL RECEIPTS FROM 1ST APRIL 1883 TO 1ST DECEMBER 1883.			TOTAL RECEIPTS FROM 1ST APRIL 1884 TO 29TH NOVEMBER 1884.			Total increase in 1884.	Total decrease in 1884.
Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked.		
	Rs.	Rs.		Rs.	Rs.		Rs.	Rs.		Rs.	Rs.	Rs.	Rs.
363	1,06,990	403	369*	1,37,343	372	343	85,42,180	14,800	334	86,74,206	10,855	1,21,064	.....

\*Increase in mileage.

	Miles.
Eastern Bengal State Railway	363
Bengal Central Railway	91
Total	454

## BENGAL CENTRAL RAILWAY.

Approximate Return of Traffic for week ended 29th November 1884 on 136 Miles open.

	COACHING TRAFFIC.		MERCHANDISE AND MINERAL TRAFFIC.		Other earnings (estimated).	Total earnings.	TRAFFIC TRAIN-MILES RUN.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A. P.	Mds. c.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for the week ...	18,148	7,211 0 0	15,016 0	1,430 0 0	43 0 0	8,071 0 0	8,903	1,000	9,903
Or per mile of railway ...	144	57 9 0	103 0	11 0 0	.....	58 0 0	.....	.....	.....
For previous 52 weeks of half-year ...	271,272	1,40,233 0 0	2,38,511 0	20,642 0 0	227 0 0	1,70,872 0 0	57,430	22,571	80,001
Total for 52 weeks ...	289,420	1,50,444 0 0	2,53,527 0	22,072 0 0	1,037 0 0	1,71,909 0 0	71,423	23,627	95,050
COMPARISON.									
Total for corresponding week of previous year ...	11,876	1,006 0 0	1,372 0	179 0 0	15 0 0	2,001 0 0	911	237	1,148
Per mile of railway corresponding period of previous year ...	531	54 0 0	103 0	5 0 0	1 0 0	50 0 0	.....	.....	.....
Total to corresponding date of previous year ...	217,863	23,094 0 0	2,97,294 0	8,005 0 0	224 0 0	47,305 0 0	19,509	6,794	26,303

## FINANCIAL YEAR.

Approximate Statement of Gross Receipts of the Bengal Central Railway.

RECEIPTS FOR WEEK ENDING 1st DECEMBER 1883.			RECEIPTS FOR WEEK ENDING 29th NOVEMBER 1884.			TOTAL RECEIPTS FROM 1st APRIL 1883 TO 1st DECEMBER 1883.			TOTAL RECEIPTS FROM 1st APRIL 1884 TO 29th NOVEMBER 1884.			Total increase in 1884.	Total decrease in 1884.
Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked.		
	Rs.	Rs.		Rs.	Rs.		Rs.	Rs.		Rs.	Rs.	Rs.	Rs.
120	8,491	70	136	8,571	62	80	75,045	2,173	125	8,76,101	2,329	1,44,000	.....

## PATNA AND GYA STATE RAILWAY.

Approximate Return of Traffic for week ended 6th December 1884 on 57½ miles open.

	COACHING TRAFFIC.		MERCHANDISE AND MINERAL TRAFFIC.		Other earnings (estimated).	Total earnings.	TRAFFIC TRAIN-MILES RUN.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A. P.	Mds. c.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for the week ...	12,461	5,243 7 0	40,482 30	2,932 4 0	53 11 0	8,236 8 0	1,706	1,404	3,110
Or per mile of railway ...	216	109 3 5	694 30	51 4 8	9 14 2	101 4 10	.....	.....	.....
For previous 52 weeks of half-year ...	294,877	1,72,477 15 0	9,75,551 10	47,309 2 0	2,029 4 0	2,49,516 8 0	88,126½	21,068½	109,195
Total for 52 weeks ...	311,338	1,79,721 6 0	10,25,014 0	70,741 0 0	2,079 15 0	2,62,543 14 6	89,042½	22,238½	111,281
COMPARISON.									
Total for corresponding week of previous year ...	4,100	2,369 12 6	24,208 20	2,510 12 0	52 0 0	6,033 8 6	1,780	979	2,759
Per mile of railway corresponding week of previous year ...	149	69 12 0	433 14	49 2 8	9 14 7	119 18 10	.....	.....	.....
Total to corresponding date of previous year ...	223,007	1,34,478 1 0	7,58,765 10	55,899 3 0	1,657 1 0	1,91,829 5 0	42,004	10,038	52,042

Approximate Statement of gross receipts of the Patna and Gya State Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.

RECEIPTS FOR WEEK ENDING 6th DECEMBER 1883.			RECEIPTS FOR WEEK ENDING 6th DECEMBER 1884.			TOTAL RECEIPTS FROM 1st APRIL 1883 TO 6th DECEMBER 1883.			TOTAL RECEIPTS FROM 1st APRIL 1884 TO 6th DECEMBER 1884.			Total increase in 1884.	Total decrease in 1884.
Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked.		
	Rs.	Rs.		Rs.	Rs.		Rs.	Rs.		Rs.	Rs.	Rs.	Rs.
57½	2,363	120	57½	2,335	161	57½	2,11,053	2,438	57½	2,60,229	2,329	84,986	.....

## SINDIA STATE RAILWAY.

Approximate Return of Traffic for week ended 6th December 1884 on 74½ miles open.

	COACHING TRAFFIC.		MERCHANDISE AND MINERAL TRAFFIC.		Other earnings (estimated).	Total earnings.	TRAFFIC TRAIN-MILES RUN.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A. P.	Mds. C.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
For the week ...	4,866	4,427 2 0	59,198 30	3,400 9 0	118 8 0	7,950 3 0	681½	1,149	1,830½
For the week of railway ...	...	50 0 10	...	45 11 7	1 9 0	100 21 5	...	...	...
For 22 weeks of half- ...	94,787	77,227 3 0	10,78,446 30	51,896 7 3	2,246 11 8	1,31,338 8 0	14,113½	20,018	34,131½
Total for 23 weeks ...	99,653	81,654 5 0	11,37,645 20	55,293 8 3	2,365 8 8	1,39,008 0 0	14,795	20,004	34,800
COMPARISON.									
For corresponding week of previous year ...	4,076	3,391 0 1	53,410 10	4,072 7 11	13 9 0	7,390 5 1	400	1,226	1,626
For mile of railway corresponding week of previous year ...	...	44 5 0	...	53 11 7	0 8 7	95 6 2	...	...	...
Total to corresponding date of this year ...	102,117	81,537 15 8	8,08,881 20	55,490 4 0	2,780 12 0	1,39,743 16 8	14,930	20,402	35,332

Approximate Statement of gross receipts of the Sindia State Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.

RECEIPTS FOR WEEK ENDING 6th DECEMBER 1883.			RECEIPTS FOR WEEK ENDING 6th DECEMBER 1884.			TOTAL RECEIPTS FROM 1st APRIL 1883 TO 6th DECEMBER 1883.			TOTAL RECEIPTS FROM 1st APRIL 1884 TO 6th DECEMBER 1884.			Total increase in 1884.	Total decrease in 1884.
Receipts.	Per mile worked.	Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked.	Mean mileage worked.	Rs.	Rs.
Rs.	Rs.		Rs.	Rs.		Rs.	Rs.		Rs.	Rs.		Rs.	Rs.
7,320	98	74½	7,950	167	74½	9,24,370	1,019	74½	2,37,668	3,190		18,276	...

## GHAZIPUR-DILDARNAGAR STATE RAILWAY.

Approximate Return of Traffic for week ended 6th December 1884, on 12 miles open.

	COACHING TRAFFIC.		MERCHANDISE AND MINERAL TRAFFIC.		Other earnings (estimated).	Total earnings.	TRAFFIC TRAIN-MILES RUN.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A. P.	Mds. C.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
For the week ...	2,000	854 6 0	24,089 30	805 5 0	27 0 0	1,270 15 0	300	129	429
For the week of railway ...	...	29 8 0	...	74 9 7	2 4 5	106 0 7	...	...	...
For 22 weeks of half- ...	46,101	3,417 0 0	2,14,392 20	4,768 9 0	800 4 0	13,709 13 6	4,740½	1,097½	5,838
Total for 23 weeks ...	48,101	3,771 6 0	2,39,181 10	5,440 12 0	827 10 0	15,697 12 0	4,980½	1,695½	6,676
COMPARISON.									
Total for corresponding week of previous year ...	2,180	400 0 9	20,514 20	689 0 0	35 14 0	1,156 4 9	127	309	436
For mile of railway corresponding week of previous year ...	...	33 6 5	...	48 4 0	2 15 10	104 9 0	...	...	...
Total to corresponding date of previous year ...	49,787	3,572 1 11	2,84,933 10	6,347 2 0	680 8 0	16,609 11 11	4,978	1,760	6,738

Approximate Statement of gross receipts of the Ghazipur-Dildarnagar State Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.

RECEIPTS FOR WEEK ENDING 6th DECEMBER 1883.			RECEIPTS FOR WEEK ENDING 6th DECEMBER 1884.			TOTAL RECEIPTS FROM 1st APRIL 1883 TO 6th DECEMBER 1883.			TOTAL RECEIPTS FROM 1st APRIL 1884 TO 6th DECEMBER 1884.			Total increase in 1884.	Total decrease in 1884.
Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked.	Rs.	Rs.
Rs.	Rs.		Rs.	Rs.		Rs.	Rs.		Rs.	Rs.		Rs.	Rs.
12	1,180	98	12	1,277	106	12	31,232	1,603	12	32,971	2,748	1,739	...

## BENGAL PROVINCIAL RAILWAYS.

## Weekly Statement of Traffic Receipts.

Latest return received.	Name of Railway.	Length open.	RECEIPTS FOR WEEK ENDING		TOTAL RECEIPTS FROM 1ST JANUARY		Total increase in 1884.	Total decrease in 1884.	Percentage of increase or decrease.
			20th October 1884.	18th October 1884.	To 18th October 1884.	To 18th October 1884.			
1884.		Miles.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	
18th October	Northern Bengal	240	37,531 0 0	54,913 0 0	(a) 7,45,332 0 0	14,05,365 0 0	1,82,537 0 0	— 30	
18th do.	Tripura	230	1,807 0 0	18,188 0 0	6,79,433 0 0	9,17,707 0 0	2,58,272 0 0	— 7	
1st November	Nalhati	274	1,444 0 0	1,887 0 0	67,702 0 0	6,44,000 0 0	4,902 0 0	— 7	
	Total	504	51,032 0 0	74,988 0 0	28,50,150 0 0	26,07,002 0 0	70,843 0 0	— 3	

(a) This includes the supplementary figures for the quarter ending 30th of September 1884.

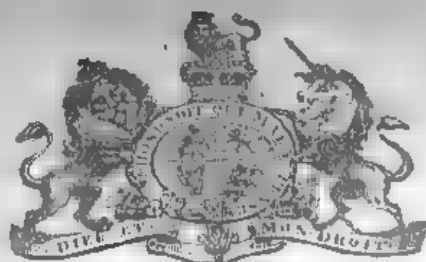
## DARJEELING-HIMALAYAN RAILWAY COMPANY, LIMITED.

	Rs.	A.	P.
Earnings for week ending 20th November 1884	8,843	0	0
Corresponding week last year	8,389	9	3
Increase	453	6	9
Receipts from 1st July to 20th November 1884	1,97,447	11	5
.. from 1st July to 1st December 1883	1,85,072	13	7
Increase	2,867	13	10
Miles open week ending 20th November 1884	50		
Corresponding week last year	50		
Receipts per mile open week ending 20th November 1884	176	13	9
Corresponding week last year	167	12	8
Increase	9	1	1

DARJEELING, the 6th December 1884.

W. STEVENSON, Secretary.





# SUPPLEMENT TO The Calcutta Gazette.

WEDNESDAY, DECEMBER 24, 1884.

## OFFICIAL PAPERS.

*Non-Subscribers to the GAZETTE may receive the SUPPLEMENT separately on payment of Six Rupees per annum if delivered in Calcutta, or Twelve Rupees if sent by Post.*

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## RESOLUTION ON THE REPORT ON THE ADMINISTRATION OF THE CUSTOMS DEPARTMENT FOR THE YEAR 1883-84.

REVENUE DEPARTMENT—MIS. REVENUE—No.

Calcutta, the 22nd December 1884.

### RESOLUTION.

#### READ—

Report on the Administration of the Customs Department for the year 1883-84.

The following statement shows the gross and net customs revenue collected in Bengal on all articles during the past five years:—

	1879-80.	1880-81.	1881-82.	1882-83.	1883-84.
	Rs.	Rs.	Rs.	Rs.	Rs.
Import duty (excluding duty on salt)	72,18,178	72,72,428	61,72,001	34,87,918	15,15,590
Duty on salt	2,34,22,034	2,27,44,383	2,37,10,023	1,74,72,613	1,73,13,582
Export duty	16,16,030	17,99,354	20,95,809	21,25,402	22,02,160
Total gross duty	2,21,56,180	2,18,16,179	2,19,76,813	2,30,85,123	2,08,31,332
Refunds and drawbacks—					
Imports	2,25,800	2,37,006	2,04,428	2,20,430	2,10,091
Exports	96,320	71,070	1,08,540	2,10,840	1,20,191
Total	2,95,320	4,00,073	4,09,973	4,37,470	3,30,282
Total net duty	2,18,60,860	2,14,16,106	2,15,66,840	2,26,47,653	2,05,01,050

The decline in the net duty of Rs. 1,63,282, or 7 per cent., is chiefly due to the falling off of Rs. 64,479 in the salt duty and of Rs. 1,40,473 in the export duty on rice. The reduced export of the latter article was the natural consequence of a short crop, and the same cause has probably tended to defer the gradual increase in the consumption of salt which was anticipated in the Resolution on last year's report. The decline of 35 per cent.

in the quantity cleared bears out this view. Import duty, exclusive of salt, shows a small increase of Rs. 23,572, or 1·8 per cent., due to larger collections under the heads of liquors and arms and ammunition. Looking to the returns for the several ports, it will be seen that the net revenue of Calcutta has fallen by 2 per cent., while that of all the outports has risen in varying proportions.

2. The total value of the imports into Bengal, exclusive of Government transactions, rose from Rs. 28,37,25,812 to Rs. 30,06,49,292. The rise was most marked in foreign merchandise, where it exceeded one crore and 37 lakhs. The imports of treasure, on the other hand, declined, the net result being an increase in the value of the foreign trade from Rs. 23,41,84,301 to Rs. 24,43,64,406. In the coasting trade a similar state of things has prevailed, the imports of merchandise rising by more than eighty lakhs, and those of treasure falling by over thirteen.

4. The value of the export trade of the year was Rs. 43,56 07,096, against Rs. 42,46,65,199 in 1882-83. In the foreign trade, exports rose in value from Rs. 34,43,30,483 to Rs. 36,21,32,528, representing an increase in the value of merchandise of Rs. 1,95,68,306, and a decrease in treasure amounting to Rs. 17,65,261. The total coasting trade exports show a decline from Rs. 8,03,34,716 to Rs. 7,84,73,568, owing to the reduced exports of Indian produce and to smaller shipments of silver to ports in British Burma. On the other hand, there was a considerable increase in the exports of foreign merchandise, such as cotton twist and yarn to Madras and piece-goods to Burma.

5. *Calcutta Foreign Trade.*—Turning now to the trade of the different ports in Bengal, it is observed that the imports of Government stores into the Port of Calcutta increased by more than 18 lakhs, or 19 per cent., railway plant alone showing an increase of more than 9 lakhs. Woollen piece-goods increased by more than 4½ lakhs, and paper and pasteboard by nearly 4 lakhs. Apart from Government transactions, the imports of the foreign trade of Calcutta rose from Rs. 23,39,17,864 to Rs. 24,40,48,995, or 4·3 per cent., and the exports from Rs. 33,40,61,753 to Rs. 35,07,72,762, or 5·5 per cent. The increase in imports was chiefly under the heads of railway plant, machinery, metals, cotton twist and woollen piece-goods; while the increase in exports occurred in raw cotton, indigo, wheat, hides, and oil-seeds. On the other hand, the exports of jute, gunny-bags, lac and opium fell off in various proportions.

6. A few slight changes are observed in the proportions which different countries contribute to the foreign trade of Calcutta. Thus, the share taken by the United Kingdom has increased from 62·35 to 65·40, the trade with France has risen from 2·80 to 3·02, and that with Austria from ·99 to 1·23. Hong-Kong, the United States, Ceylon, the Straits Settlements, and Australia have, on the other hand, lost ground. In the case of Hong-Kong the decrease is chiefly in the imports of treasure; while the trade with the United States has fallen off most largely in imports of kerosine oil, but also to a certain extent in exports of Indian produce. Ceylon has taken less grain from Calcutta, and has exported and imported less treasure than in ordinary years. The Straits Settlements have contributed smaller supplies of tin and pepper, and received considerably less opium than usual. In the case of Australia the total trade shows a decline of 37 lakhs, or 23·3 per cent., due to the smaller shipments of gunny-bags and tea. Imports, on the other hand, have increased, and there is said to be a prospect of the trade with India being developed by the means of a special line of steamers. The proportion of the foreign trade of Calcutta using the Suez Canal rose from 58·6 to 63·6, and it is stated that only 10 per cent. of the trade with Europe is carried by the Cape.

7. *Imports.*—The imports of cotton twist and yarn show an increase in value from Rs. 1,03,57,430 to Rs. 1,18,21,772, and in quantity from 13,058,628 lbs. to 15,255,962 lbs. At the same time the value of the imports of piece-goods of all kinds rose from Rs. 11,35,14,475 to Rs. 11,38,80,206. American piece-goods fell off remarkably, owing to English drills having displaced American drills in the market. Among English goods grey shirtings, which formerly commanded a ready sale, are said to have lost their popularity owing to the preference of the consumers for coarser and more substantial fabrics. On a general review of the trade in both yarn and piece-goods during the past year, there seems to be reason for believing that the increased importation was due rather to excessive production

in England, which compelled merchants to divert their goods to India from the overstocked markets of China and Japan, than to any genuine extension of demand. • Indeed, the partial failure of crop, which occurred in 1883, furnishes of itself sufficient reason for thinking that the purchasing power of the people must have been somewhat reduced during the year. The current season has been equally unfavourable, and, so far as the piece-goods' trade depends upon agricultural prosperity, there seems to be no immediate prospect of a more active demand. On the other hand, it is probable that the extension of railways in Bengal, by cheapening these heavy goods to the consumers, will lead to increased purchases. Thus, the Bengal-Nagpore Railway, on which work has recently commenced, will open up large areas, where at present pack-bullocks form the only means of carriage, and the price of cloth is high in proportion to the extreme difficulty of transport. The demand for woollen piece-goods was steady throughout the year, the average price being somewhat less than in 1882-83. The trade in shawls was greater than at any time during the last five years, and there was no decline in the average price.

8. The total value of metals imported into Calcutta rose from Rs. 2,28,32,317 to Rs. 2,44,53,501, the increase being most marked under the heads of copper, wrought iron, and steel. The imports of unwrought iron have declined from the unusually high standard of the preceding year. The extended use of wrought iron in buildings is evidenced by a rise in the imports of 68½ per cent. The imports of lead show a decline of nearly 5,000 cwt., but this is said to be only a temporary fluctuation, as the demand for this metal for use in lining tea-boxes is necessarily of a permanent character. The value of the imports of railway plant and rolling-stock has risen from Rs. 40,17,623 to Rs. 80,58,989, or 100½ per cent., and this is likely to be maintained. Machinery and mill work also show an increase from Rs. 61,29,592 to Rs. 82,79,734, due to the extension of the cotton and jute industries. Here, however, a decline is anticipated, as the limits of profitable production appear to have been reached, and the results of the past year have, in the case of jute at any rate, been singularly unfavourable.

9. The imports of malt liquors show a rise in quantity from 508,006 to 601,477 gallons, and in value from Rs. 12,09,723 to Rs. 14,58,090. The Collector of Customs observes that the quantity of Pilsener beer imported has increased twenty-fold in five years, and now stands second only to the consumption of Bass' beer. He also refers to the increased imports of European beer as showing that beer brewed in the hills has failed at present to meet the taste of the general public. The imports of wines and spirits have declined in quantity and risen in value, owing to the increased consumption of high-priced whisky and champagne. The demand for brandy seems to be steadily falling off, and the same remark applies in a less degree to claret and sherry. The Collector of Customs discusses, with much good sense, the reasons why the Australian wines, of which specimens were brought to the International Exhibition, are not likely to become popular in India, unless their character is considerably modified. In Mr. Armstrong's judgment these wines are too strong and too sweet; they do not stand the climate; and their names, borrowed from those of well-known European wines, suggest expectations which their quality fails to satisfy.

10. As compared with the large imports of 1882-83, the imports of mineral oils have fallen by 41½ per cent. The quantity imported (7,566,526 gallons) was, however, considerably in excess of the imports of 1881-82, and preceding years. The Collector observes that, although the production of mineral oil in America may be supposed to have reached its maximum, the competition of newly discovered sources of supply, such as Batoum on the Caspian and Bushire in the Persian Gulf is likely to prevent any considerable rise in the price of American oil. On the other hand, the imports from British Burma have declined, and there seems to be little prospect of that province meeting any large proportion of the growing demand from Bengal. The use of kerosine oil among all classes of the native population seems likely to increase. Not only is it used for lighting, but there is a strong belief in its healing properties as an application for bruises and various kinds of skin disease. The importation of umbrellas has increased considerably, and the trade was a most satisfactory one during the year. This fact may be taken as some slight indication of the growth of habits of greater comfort among the people.

11. The imports of corals show a rise in quantity from 122,971 lbs. to 154,716 lbs., and in value from Rs. 17,19,786 to Rs. 20,39,316. The over pro-

duction in Italy, referred to in last year's report, is said to have continued and to have caused prices to rule unusually low, while the Nepalese demand fell off owing to a dispute with the Tibetans. It is stated, on the other hand, that a combination has been formed among the Italian manufacturers to regulate shipments, and, independently of this, the extension of trade with Thibet, which may perhaps be looked for, will probably do much to improve the prospects of this industry.

12. Although no attempt seems to have been made to supply the native market with cheap Indian tea, the imports of China tea have fallen by about  $33\frac{1}{2}$  per cent., while the average price has remained as low as 6·3 annas per pound. The decline is attributed to over importation in 1881-82, leaving large stocks in hand which have not yet been cleared off.

13. Under the head of tobacco, the imports of cigars have increased, and there are signs of a demand for the more expensive kinds of cigars supplied by the United Kingdom; while at the same time the imports of Indian-made cigars show a steady increase. The imports of manufactured tobacco declined owing to excessive stocks and to a rise of prices in America.

14. *Exports.*—Some changes may be noticed in the proportion which various articles contribute to the export trade of Calcutta. Thus, the exports of grain and pulse have risen from  $11\frac{1}{2}$  to 15 per cent., jute has fallen from 20 to 14, and tea and oil-seeds have risen by 1 per cent. In other respects the normal proportions have, on the whole, been maintained. Owing probably to the partial failure of crop in 1883-84, the exports of rice fell off from 6,607,497 cwts. to 6,082,023 cwts.; while the value rose from Rs. 1,92,11,186 to Rs. 1,98,85,582. This was a great boon to the great rice-producing districts of Eastern Bengal, where the crop was a tolerably full one, and where producers often have to complain of the low prices of a year of plenty. Orissa also contributed an unusually large proportion of the year's exports, and the rice trade of that Province seems to show signs of recovering the importance it attained in 1877-78.

15. The exports of wheat for the last five years are shown in the following statement:—

1878-80.		1880-81.		1881-82.		1882-83.		1883-84.	
Cwt.	Rs.	Cwt.	Rs.	Cwt.	Rs.	Cwt.	Rs.	Cwt.	Rs.
1,883,028	78,47,608	3,935,269	1,51,33,950	6,663,806	2,52,03,296	4,439,563	1,79,33,880	7,611,414	3,04,27,344

The Collector of Customs makes the following comments on the prospects of the wheat trade.

"The three principal competitors in this trade with the United Kingdom are, it will be seen, the United States, Russia, and India. From the first, the receipts show a heavy decline, while from the two others there have been very substantial increases, Russia still occupying the second place, notwithstanding the large increase in receipts from India.

"The extension of the Indian wheat trade to very large proportions is, I believe, merely a question of the opening out of suitable tracts of country by railways and of cheap carriage. It may be said to be fairly ascertained now that the price of wheat in the large markets up country is substantially lower than the price at similar markets in the United States, while the quality of the wheat is good; in fact this price is so low that ultimately the bulk of the trade should be obtained by India.

"During the past year freights by sea from Calcutta have been very low, and owing to this and the reduction in the rate of railway carriage mentioned in the last year's report, exporters have been enabled to lay down their wheat in London at considerably cheaper rates than in the previous year, and so to compete on better terms with America. The larger trade of the past year is therefore a very good index of the effect of cheap carriage. Low freights, however, cannot always be expected, as the dearth of employment for vessels, which caused a large quantity of tonnage to be available at low rates, cannot be looked for every year.

"The importance of India as a competitor with the United States has forced itself very prominently upon the attention of the growers of wheat in the Western States, with the result that prices at Chicago are reported to be lower than they have been for twenty years. Low freights are also ruling, so that the competition has become very keen; but still India holds her own."

Cheap carriage to the coast is no doubt the main factor in the development of India's great resources as a wheat-producing country. But it is not the only one, and it is doubtful whether Indian wheat will be able to maintain a firm hold upon European markets, unless the cultivators do

more than they have hitherto done to keep the quality uniform, and to avoid mixing and adulteration. It will be one of the duties of the new Agricultural Department not to teach cultivators details of cultivation, which they know already, but to bring home to them the fact that if their products are to command a good price they must be up to a certain standard and be supplied under certain conditions.

16. There was a fall in the exports of raw jute from 9,191,884 cwt. to 5,953,147 cwt., owing partly to a failure of crop, and partly to the fact that the area sown with jute was contracted by the cultivators themselves, who were dissatisfied with the low prices which resulted from the full crop of the previous year. This element of uncertainty must always tend to affect the prospects of jute. It is grown on the same classes of land as some kinds of rice, and thus competes with the staple food-crop of the country. The exact effects of this interdependence of the two crops can probably not be defined, but it must obviously exercise an important influence upon the fluctuations of the trade from year to year. The exports of gunny-bags show an increase in quantity from 59,323,573 to 61,420,662, and a decline in value from Rs. 1,39,81,875 to Rs. 1,22,85,708. The prospects of the industry are at present believed to be discouraging. Production has outrun demand. New mills have been built or planned; the price of raw material has risen 50 per cent., while that of the manufactured article has fallen by 25; consequently many of the mills are working at a loss, and must continue to do so till the price of gunny-bags rises or the price of raw material falls.

17. A further increase is observed in the exports of tea from 56,846,361 lbs, valued at Rs. 3,62,06,204, to 59,190,914, valued at Rs. 4,02,34,619. The average price has advanced by 7 pies per pound, and the quality of the tea is believed to have been good, notwithstanding the large shipments made. The exports to Australia and America fell off remarkably, owing, it is said, to those markets having been overstocked in the preceding year. There seem, however, to be prospects of the trade with both countries recovering itself shortly. An encouraging feature in the progress of Indian tea is the steady development of its hold upon the English market. Thus, in 1877, Indian tea supplied only 19 per cent. and China tea 81 per cent. of the English demand, while in 1883 the percentage of China tea had fallen to 65.4, and that of Indian tea risen to 34.6 per cent. Ceylon tea is now said to be likely to compete with Indian tea in the English markets. The results of such competition can hardly be foreseen at present, but the development of the Ceylon trade should be watched and reported on in greater detail next year.

18. Among the other articles of export, indigo shows an increase of more than 10 per cent., and hides and skins of 15½ per cent. In raw silk there was an advance of 18½ per cent. owing to a revival of the demand for Bengal silk in the London market. Raw cotton shows a remarkable increase upon the reduced exports of last year, though the quantity is still considerably less than in 1880-81. There seems, however, to be some promise of the trade recovering, as a demand for short stapled cotton is said to have arisen in Lancashire. The entire cessation of exports to Austria is ascribed by the Collector to the fact that it was more profitable to ship through London than direct to Trieste. The exports of lac decreased by 18 per cent. in quantity and 20 per cent. in value. Excessive stocks of shellac are said to have accumulated, and the trade is not likely to revive till these have been worked off. Sugar shows an increase of 86 per cent., which would, it is said, have been still larger, but for the competition in the English market of beet sugar imported from Germany. The export of unmanufactured tobacco rose by 143½ per cent., but this was to some extent due to the belief that the rate of duty in Holland was likely to be raised.

19. The net imports of silver fell off by about a quarter of a lakh, and the net imports of gold by a little over eight lakhs. Neither the Board nor the Collector of Customs attempt any explanations of these variations. It may be assumed, however, that the decline in the imports of gold represents a decreased demand for articles of personal ornament, arising from the failure of crop. The people had less to spend, and purely luxurious expenditure was naturally the first to be reduced.

20. *Coasting Trade*.—The total imports of the coasting trade of Calcutta rose from Rs. 2,67,14,775 to Rs. 3,33,17,031; while the total exports fell from Rs. 5,00,27,422 to Rs. 4,73,35,513. Under the head of imports, cotton



twist and cotton piece-goods from Bombay show a remarkable increase, upon which the Collector remarks:—

"The advance in importations in five years is most marked, being over 100 per cent., while in comparison with 1874-75 the receipts have increased twenty-fold. The development of cotton manufactures in Bombay is no doubt the principal cause of this advance. The possibility of a war between France and China also caused a diversion of shipments from China to Calcutta, for heavy stocks accumulated at Hong-Kong and discouraged further importation. Competition between Lancashire and Bombay in low counts of yarn has practically ceased, the latter having, with the exception of a few thousand lbs, entirely supplied this market with yarns of 24s. and under. If the receipts from Bombay of grey twist and yarn continue to advance in the same proportion as they have for the last few years, they will very soon reach those from the United Kingdom as the following figures show:—

						1883-84.
						Rs.
From United Kingdom	...	...	...	...	...	8,384,186
Bombay	...	...	...	...	...	6,780,700."

Pepper, sleepers, castor-seeds, and turmeric from Madras, teak-wood and cutch from British Burma, and rice from the Bengal outports are the only other items demanding special notice. The decline in exports occurred in shipments of rice, gunny-bags, sugar, cotton and foreign twist and piece-goods to Bombay Madras and Pondicherry. The exports to British Burma and the Bengal outports show an increase.

21. *Minor Ports, Chittagong.*—The total value of the foreign trade of Chittagong rose from Rs. 94,18,552 to Rs. 1,00,81,967, the value of imports rising from Rs. 2,65,999 to Rs. 3,15,191, and of exports from Rs. 91,52,553 to 97,46,776. As is usual, by far the largest proportion of the imports consists of salt, in which there was an increase of Rs. 89,556 during the year. The increase in the value of the exports occurs in all the chief articles exported, while all, except paddy and tobacco, show a decrease in quantity. A new branch of trade has been established with New York in jute cuttings, the value of which is said to be Rs. 4,85,245. In the coasting trade there was a total increase of Rs. 4,53,013, or 3 per cent., the details of which are of no special interest.

22. *The Orissa Ports.*—The value of the total trade of the Orissa ports rose during the past year by Rs. 25,83,095, or 21.6 per cent. Balasore made large shipments of rice to the Mauritius, the Maldives and Muscat; Cuttack sent rice to Colombo; and Pooree exported to Ceylon. At all of the ports the increase in imports was chiefly in gunny-bags, tobacco, cocoanut-oil and kerosine.

23. *Port of Naraingunge.*—The continuous improvement in the trade of this port, remarked upon last year, was arrested for the time being in 1883-84, the value of the trade showing a decrease of Rs. 1,02,244, or 1.2 per cent. "This," the Collector of Customs observes—

"Is attributable to the failure of the cotton crop in Chittagong having affected the import trade as did the low prices of jute prevailing last year, the export. Messrs. David and Company, the largest importers of cotton, seeing no prospect of a remunerative business, made no imports during the year; jute was not exported in such large quantities direct to Chittagong, but sent to Calcutta instead, better prices being obtainable in the latter place; the outturn of the jute crop was also smaller than in the preceding year, a lesser area having been brought under cultivation, and there having been a partial failure of the crop owing to want of rain."

Proposals are now under consideration for a rough survey of the channels of the Megna leading to Naraingunge, and should these prove to be navigable by sea-going vessels, a great development may be looked for in the trade of the port.

24. The Lieutenant-Governor's acknowledgments are due to the Board for their efficient administration of the Department during the year, and to Mr. Armstrong, the Collector of Customs, for a full and careful report. The names of the officers selected by the Board for commendation will be communicated to the Appointment Department.

By order of the Lieutenant-Governor of Bengal,

A. P. MacDONNELL,

Secretary to the Government of Bengal.

RESOLUTION ON THE REPORT OF THE COMMITTEE FOR THE  
MANAGEMENT OF THE CALCUTTA ZOOLOGICAL GARDENS  
FOR THE YEAR 1883-84.

REVENUE DEPARTMENT—MISCELLANEOUS—(F.)

*Calcutta, the 22nd December 1884.*

RESOLUTION.

READ—

The Report of the Committee for the Management of the Calcutta Zoological Gardens for the year 1883-84.

The total income of the Gardens during the year amounted to Rs. 52,398 against Rs. 41,149 in 1882-83, and the expenditure increased from Rs. 38,284 in 1882-83 to Rs. 52,277 in 1883-84. The figures for 1882-83 are exclusive of the special grant of Rs. 8,000 made by Government for iron railings round the Gardens, and the expenditure incurred on account of the same.

2. The receipts from donations and subscriptions show a further falling off as compared with the maximum income of Rs. 17,970 from those sources in 1879-80, and the minimum income of Rs. 1,500 in 1882-83. Only Rs. 550 were received under that head during the year of report, although the International Exhibition attracted to Calcutta a large number of wealthy persons from whom donations might have been expected. This amount consisted wholly of subscriptions from life members, and no donations, properly so called, were received at all. Such sources of income must, however, necessarily be exhausted sooner or later, and the Committee are doubtless right in assuming that they cannot count upon the future receipts under these heads doing much to place the finances of the Gardens upon a permanent basis.

3. In order to induce the public to take a more active interest in the management of the Gardens, and to contribute more largely to their maintenance, it was proposed by the Honorary Committee managing the Gardens that the donors and subscribers should be permitted to form themselves into a society to carry out the objects for which the Calcutta Zoological Gardens were established; that the management should be vested in a Committee on which the society should be represented by four members of their choice, and which should consist further of certain *ex-officio* members and any others whom the Government might nominate; that the Committee should be called the Council, and the members of the society, Fellows, with the privilege of using the letters F. Z. S. B. after their names. The Lieutenant-Governor accepted the proposal, and it has since received the sanction of the Government of India. The Committee were accordingly asked in March 1883 to frame the necessary articles of association under the Companies Act of 1882, and to forward them for the approval of Government. No action has, however, been yet taken in the matter by the Committee at whose instance the scheme was elaborated. The Lieutenant-Governor would be glad to learn from the Committee whether they still desire to proceed with it.

4. The total number of visitors to the Gardens during the year under report was 188,532 against 126,080 in 1882-83 and 180,826 in 1879-80, which was the largest number since the establishment of the institution. This increase is believed to have been due in part, at any rate, to two causes. In August 1883 some aborigines from the Andaman and Nicobar Islands were brought to Calcutta and lodged in the Gardens, and during the first month of their stay the average weekly number of visitors went up from 1,980 in July to 8,685 the next month. The Calcutta Exhibition, which attracted a large number of people from the mofussil, also increased the weekly attendance considerably. Although, therefore, a falling off in the total attendance, as compared with that of 1883-84, may be looked for during the current year, there is reason to suppose that the reduction of the entrance fee, which took effect in October 1882, will lead to a steady increase in the number of visitors as compared with the number in 1882-83.

5. The most interesting additions to the menagerie were two Himalayan bears from Mergui in Tenasserim. The donation is of special scientific interest owing to the fact that it affords the first authentic evidence of the occurrence of this species in the Mergui fauna. Two Sumatran double-horned

rhinoceri and a full grown female Malayan tapir were purchased at a cost of Rs. 4,500. Such animals are seldom brought to the Calcutta market for sale, and the Committee did well to take the opportunity of purchasing them.

6. Measures have at length been taken to carry out one of the main objects of the foundation of the Gardens by forming a dairy farm and the nucleus of a breeding establishment on the Begunbari grounds. This area has been reclaimed and fenced in; sheds have been built; nine heifers and one bull have been imported from Australia, and some fine hybrid stock has been produced by crossing country cows with Gyal bulls. In the Lieutenant Governor's opinion this is a most important and promising work, and if judiciously followed up, it may afford opportunity and justification for recognizing the Gardens as an institution contributing directly to the agricultural advancement of Bengal. In course of time the Agricultural Department now under formation will no doubt pay attention to the improvement of milch and plough-cattle; but before any such improvement can be attempted on a large scale, a long series of experiments will have to be made and possibly new breeds created. In this experimental stage, therefore, it seems to the Lieutenant-Governor that the Committee of the Zoological Gardens can render very valuable assistance. Among its members are several gentlemen whose scientific and practical attainments qualify them to undertake the task of improving the breed of cattle in Bengal; and it is admitted that by effecting even a commencement of such improvement, much would be done to solve the question of improving the agricultural system of the country. If arrangements could be come to whereby in this question of improving the breed of cattle the operation of the Committee of the Gardens could be co-ordinated, as it is hoped to co-ordinate the operations of the Agri-Horticultural Society in agricultural improvement with the larger operations of the Department of Agriculture, much good to the country at large would undoubtedly ensue. Such co-ordination would permit of the efforts of the Committee being supported to some extent by funds from the budget of the Agricultural Department, and it would also enable the Committee to choose for these experiments other localities and climates throughout these Provinces than the single locality in which the experiment is now commenced. If all the agencies for improving the agriculture of Bengal in its widest sense were thus brought into contact, and directed into paths of mutually supporting and harmonious action in connection with the Agricultural Department which will come into being with the commencement of the new year, much more of good is to be expected than from isolated action, impeded possibly by narrowness of funds. The Lieutenant-Governor desires that the Committee will now consider these proposals, and if they approve of them, will draw up a scheme for giving effect to them. It may be also desirable that the Director of Agriculture should be added to the Committee, in order that he may place before them his views as to the actual wants of the country from the point of view of his Department.

7. The Lieutenant-Governor has much pleasure in acknowledging the excellent work done by the Committee of the Gardens during the past year, and in thanking all the members for the time and labour they have devoted to what with the means at their disposal is a task of considerable difficulty.

By order of the Lieutenant-Governor of Bengal,

A. P. MACDONNELL,

*Secretary to the Government of Bengal.*

STATE AND PROSPECTS OF THE CROPS IN THE PRESIDENCY DIVISION.

In continuation of the reports published in the Supplement to the *Calcutta Gazette* of the 17th December 1884, the following papers are published for general information.

A. P. MACDONNELL,

*Secretary to the Government of Bengal.*

No. 11M.A., dated Calcutta, the 11th December 1884.

From—A. SMITH, Esq., Commissioner of the Presidency Division,  
To—The Secretary to the Government of Bengal, Revenue Department.

In continuation of my letter No. 10M.A. of the 30th November, I have the honour to submit copies of the Collector of Moorshedabad's No. 1308 of the 2nd, and the Magistrate of that district's No. 1763 of the 30th instant, with enclosures.

2. It will be seen from these reports that there is no present cause for anxiety in respect of any part of Moorshedabad. The worst tract described in the report is the Kulliangunge thanna, and since the Magistrate wrote his report I have received a demi-official, dated the 8th instant, from which I extract the following:—

"I came out last Tuesday, and have travelled through the Kulliangunge thana, in the Lalbagh sub-division. About this thana I reported at the end of November that it was one of the worst tracts. That only 9 annas of the land (ordinary area) had been transplanted out, and that there would be only an 8-anna crop there. This was based on the report of the Sub-Divisional Officer of Lalbagh, and I now find that he was distinctly wrong. There is certainly an average of more than 8-annas for the whole thana; but I won't go into the question at length, as you will learn what I have observed when you receive my diary, for more than half of the distance I travelled this morning; found fully a 12-anna crop (*aman* of course), and this on land where there has been in many years an utter failure on account of floods.

"I am now going to see thana Khargaon and Gokurn, reported to be the worst in Kandy. Lots of rice is coming in from Beerbhoom and prices are easier. The more I see, the less I am inclined to think that any want will be felt; but I only bear in mind that it will be unwise to attempt to foretell what will happen. However, we are certainly safe for some time to come."

3. It is manifest from the reports, as I have said above, that there is no cause for present anxiety. With regard to the future, I am inclined to think that the Magistrate's growing disinclination to believe that any want will be felt will be justified by the results. There is no reason to suppose that the ordinary sources of labour will employ fewer men this year than in ordinary years. In respect of water-supply there is also no present reason to think that showers will do less than in ordinary years to replenish the tanks.

4. I will, if the Government has no objection, allow the Magistrate to submit his next report on the 1st January, instead of the 15th instant.

5. With regard to Nuddea, I have allowed Mr. Larminie to delay his report till the end of this week, to enable him to visit one or two places that remained to be inspected. I have, however, been with him to Chudarga, to Koohtea, and to Meherpore; and I am able to give the Government full assurance that in respect of that district there is also no present cause of anxiety. In Meherpore, which was the worst part of the district, the cold-weather crops are excellent. Not only are they excellent in quality, but the failure of the *aus* crops has permitted a much larger area than ordinary to be brought under cultivation.

No. 1368G., dated Berhampore, the 2nd December 1884.

From—H. FARRER, Esq., Officiating Collector of Moorshedabad,  
To—The Commissioner of the Presidency Division.

I HAVE the honour to submit the second fortnightly report for the month of November on the state and prospects of the crops, and the condition of the people in this district, in continuation of my report No. 1301G., dated 17th ultimo, on the same subject. I must express my regret, however, that I have not been able to fulfil the promise I made in my last report, that I would spend the whole of the second-half of the month in the interior. I left for the interior on the 19th ultimo, but was obliged to return on the 24th idem, as on the following day the election of Municipal Commissioners was to be held, and I thought my presence in Berhampore might be necessary. Moreover, I found that during my absence arrears of Collectorate work had accrued, as the officer whom I had to leave in charge is also in charge of the treasury and registration. I beg to observe that just at present there is one officer less than the usual staff here at this season of the year. I intend, however, to leave for the interior to-morrow without fail, and shall visit the thana in the Lalbagh sub-division, where the prospect is most gloomy, or, at all events, least bright.

2. Although I was absent myself but a very short time, I succeeded in seeing a good deal. There having been no reports of suffering or scarcity from any other parts of the sudder division, I thought it advisable, as my time was short, to confine my observations to the places referred to by the Rev. Mr. Phillips, a Missionary of Berhampore, who he addressed a number of letters to the *Englishman* newspaper of late, in which he alleged that severe want was being felt by the people of Morjanpore, a village in the Burua thanna, by the residents of Saktipore, Basara and Ramnagore villages, in the Saktipore outpost, and by the people of a number of villages named by him, which are within the jurisdiction of Burua thanna and lie not far north of Plassey. Saktipore, Basara, and Ramnagore are on the west bank of the Bhagiruthee river, and therefore in the Kandy sub-division. From the observations that I made during my visits to these places, I am fully satisfied that Mr. Phillips has been led into error by the representations of persons who have exaggerated all the facts and circumstances from motives not always disinterested. Thus the object of the people in the villages he names on the west bank of the Bhagiruthee is to have an embankment constructed by the side of the Babla river—a question which I am told has again and again been raised and considered. The persons interested of course think this a favourable opportunity for again pressing the case. At Saktipore the *amun* is fully a 12-anna crop, and the *rubbi* crops all promise well. Hence complaints from that village are groundless, and I may mention that their truth has been carefully tested, as earthwork was begun here on the Ramnagore-Dhulian road (*vide* list of roads appended), and although there were as many as 207 labourers at work on the 19th November, the number afterwards fell off rapidly, until the 25th idem, when only 54 men remained. I may also mention that, according to the rates that are being paid by the District Committee, an able-bodied labourer can earn from 2½ to 4 annas a day. Surely there cannot be want if labourers cannot be had in any great number, when each could, by ordinary industry, earn so much as this daily.

3. Ramnagore and Basara are on the west bank of the river, and almost opposite Plassey. There the *amun* crop is not so good, but the people depend more upon *aus* and *rubbi* crops (including mulberry). The yield of the *aus* was from 6 to 8 annas; but all the *rubbis* except *kalai* are doing excellent. *Kalai* has been damaged to some extent by caterpillars (*suapokas*), but there is still reason to expect a crop of something like 10 or 12 annas, and other *rubbi* crops ought to yield a still higher outturn. I found that very few persons from villages in the neighbourhood had gone to work on our road at Saktipore, although the distance was not more than four or five miles.

4. I next visited the village of Morjanpore near Burua thanna, where the *amun* crop has to some extent failed. I found that the whole of the land that had not been transplanted with *amun* was being sown down with *rubbi* crops of various kinds. Many of these were already above the ground, and seemed to be doing remarkably well. I joined you at your camp at Lokenathpore on the 22nd November. This place is on the boundary between this district and Nuddea. From Lokenathpore I returned to Berhampore, enquiring on my way more particularly into the condition of the people of Beldanga and the surrounding villages, as I found that they had presented a petition to you complaining of their sufferings. Here, too, I found the same absence of testimony to show that actual want and suffering were being acutely felt. In the physical appearance of the people there was nothing to indicate this, although times are certainly hard. The pinch is naturally felt most by the cripples, lepers, blind, aged and infirm, who in all years have to subsist on charity. Even in the appearance of these persons, however, there was nothing out of the ordinary; nor did the number of beggars appear to be larger than usual. During all my enquiries, I found one family only the members of which were suffering from want of sufficient food. But I must describe the case: one man, himself weakly as to constitution, had to support a wife and three young children, the widow and three young children of a deceased brother, another brother lying on a sick bed, and his wife and two young children. Thus, three women and eight children were dependent on him for support. It was a Mussulman family, and the women would therefore not go out and work on the roads. It was evident from the appearance of the children that they were not receiving sufficient food for the maintenance of health; but this would have been nearly the same in years of plenty, as with rice at 25 seers for the rupee one man could not have earned enough to feed a large family like this.

5. In dealing with this particular tract of country, I may appear to have been more discursive in my remarks than the nature of this report warrants; but I beg to explain that I have been led to do so because it was from this quarter that Mr. Phillips gathered his "ounce of fact," and it is my duty to show that he not only got short weight, but had material as well. In his last letter to the *Englishman* newspaper, dated the 15th November, he named a number of villages where he stated that want was so severely felt that immediate relief was necessary. I have had a careful and exhaustive enquiry made there, and find that in three of the villages named, Rejinapore, Bikalnagore, and Janpore, there will be over a 12-anna crop. Hence, want will never be felt there at all. It is thus also evident that Mr. Phillips had very little knowledge of his subject.

6. I may now begin to deal with the sudder division of the district generally. This comprises the following thannas:—

Snjagunge.  
Gorabazar.  
Dowlatabad.  
Gowas,

Hariharpara.  
Jellinghec.  
Burua.  
Nowada.



Regarding the prospects in all of these thannas, I have consulted a number of persons, both officials and non-officials, and they one and all agree in saying that there certainly is present no distress; but while they hesitate to say to what extent want may be expected after February or March next, they consider that a tolerable expansion of the work under the control of the District Road Cess Committee would afford quite sufficient relief. Mr. Pratt, District Superintendent of Police, was good enough, at my request, to visit thannas Dowlatabad, Gowas, and Jellinghee, and has submitted copious notes on the condition of the people there, the outturn of the last *aus* crop, the state of the *amun* rice, and the prospects of the *rubbi* crops. The Sudder Sub-Deputy Collector has also visited thannas Hariharpara and Jellinghee. As regards Nowada thanna, there has never been any cause for anxiety, as a very large portion of the *kalantar*, or low-lying tract of country, lies within that jurisdiction, and there almost a bumper crop of *amun* is expected.

7. Mr. Pratt's experiences have throughout corresponded with mine. The country he travelled over consisted mostly of *aus*-producing land. Both he and the Sub-Deputy Collector estimate that the yield of the *aus* crop was between 4 and 8 annas. The yield of the *amun* crop will approximate to 6 annas. All the *rubbi* crops have been most extensively sown, including wheat and mulberry.

Although considerable damage has been done by the caterpillar to *kalai* and other pulses, the prospects of the *rubbi* crops are excellent, and if these prospects continue unimpaired, the outturn from these crops will, to a great extent, recoup the cultivators for the partial failure of the *aus* and *amun*. While the price of rice was high, 12 and 13 seers for the rupee, there was some pinching, and many persons were in need of employment, and this they found on the road repair works under the District Committee. Prices are now easier, and it is believed that rice will shortly be procurable everywhere at the rate of 15 or 16 seers to the rupee. No cases of suffering came to the notice of either the District Superintendent or the Sub-Deputy Collector.

8. Surjagunge and Gorabazar are the thannas in the immediate neighbourhood of Berhampore. They are ensured against famine, as any cases of real suffering will find relief from the charity of the Maharani Sarnomoyi of Cassimbazar. But here also there was no absolute failure of the crops. The yield of the *aus* was over 4 annas; the *amun* will be more than a 6-anna crop, and no one remembers the time when *rubbi* crops were so extensively sown and promised so excellent an outturn.

8½. Thus, speaking of the sudder sub-division generally, it appears that, although the *aus* and *amun* crops partially failed, yet *rubbi* crops have been most extensively sown, and so far they promise well. There has been a greater demand for labour than in ordinary years, but this demand has been sufficiently met by the District Road Cess Committee from the funds at their disposal. The time of reaping the *amun* harvest having now arrived, there is a smaller number of labourers at work on the district roads, but when that work is over, and the *rubbi* crops, too, have been reaped, there will again be a number of persons in search of employment.

9. I think that the tract which has suffered most from the scantiness of the rainfall has now been determined. This is a strip of country extending south from Berhampore station to the limits of the district in that direction, of a breadth of from three to five miles measured from the Bhagiruthee river. Here the level of the land is peculiarly high and *aus* is the principal crop. The land being on a higher level than that further distant from the river, that crop suffered more severely from the scantiness of the rainfall. I doubt whether the yield on this tract was so much as 4 annas. Very little *amun* can be grown in any year. The *rubbi* crops, however, have, as elsewhere, been extensively sown, and are doing tolerably well, but the caterpillar unfortunately has done considerable damage. I think that a great many persons within this area must have work to keep them going for a portion of the year. If the district fund be supplemented, sufficient employment could be provided.

10. *Lalbagh sub-division.*—The thannas in this sub-division are:—

Shahannagur.  
Manullabazar.  
Bhogwangola.

Kalyangunge.  
Sagardighi.  
Asanpore.

Of these Shahannagur, Manullabazar and Asanpore are semi-municipal, and the Azungunge terminus is situated in the last of the three. The people, therefore, are not entirely dependent on agriculture, and distress has therefore never been apprehended.

11. In the Bhogwangola thanna the *amun* rice is a very small factor, *aus* and *rubbi* being the principal crops. There was a 5-anna crop of *aus*, and this being considerably short led to a very extensive cultivation of *rubbi* crops of all kinds. These, with the exception of *kalai* and *til*, are doing remarkably well. In the first instance the *kalai* was swamped by a late inundation, and subsequently both that crop and *til* were attacked by caterpillars. They have, however, been only partially damaged. With a good *rubbi* crop this thanna will be safe.

12. The remaining two thannas of this sub-division, Sagardighi and Kalliangunge, are on the west bank of the Bhagiruthee, and therefore in the *rark* country. Very little *aus* is grown here, nor is the soil suitable for producing *rubbi* crops. *Amun* rice is the crop on which

the people almost entirely depend. In Sagardighi there was a little *aus*, which yielded at the rate of 6 annas a bumper crop. The *aman* rice, taking the whole thanna together, is an 8-anna crop. In this thanna therefore we have nothing to apprehend.

B.—13. Unfortunately the prospects in the Kalliangunge thanna are far from being favourable. Not more than 8 or 9 annas of the whole rice-producing area was transplanted out, and on this area there will not be more than an 8-anna crop. Thus, compared with a bumper crop of ordinary years, there will be only a 4 or 4½-anna crop this year: and it is reported that there are from 12 to 15 villages where very little rice at all will be reaped, and there some relief in the form of employment will be necessary after February next. *Rubbi* crops have not in other years been grown within this thanna, but several kinds are now being tried on the lands where, from want of rain, the *aman* rice was not transplanted. It seems a pity that these experiments should have to be made at the time when the ryots can least afford to make them.

14. *Janjipore sub-division*.—This sub-division comprises the following thannas:—

Dewansarai.	Suti.
Raghunathgunge.	Mirzapore.
	Shamsbergunge.

Regarding Raghunathgunge there need not be the slightest cause for anxiety, as the people there depend to a great extent on the silk industry, the prospects of which, although not very bright, do not portend disaster.

15. The people of Shamsbergunge and Dewansarai chiefly depend on the *bhadoi* or *aus* and the *rubbi* crops. It is estimated that the former gave a 6-anna yield, that is to say, half as much again as Mr. Veasey estimated it to have been in his first report on this subject. Full information had not come to hand at the time when that report was drafted. Although here also the *rubbi* crops have been very extensively sown in order to make up for the short outturn of rice, the condition is not so good as elsewhere, the *kafai* in particular being reported as almost a failure. The first sowings were swamped by a late inundation and the new crop that was put in was attacked and almost destroyed by the same caterpillar as has done as much mischief elsewhere. Nevertheless the Sub-Divisional Officer estimates that there will be an 8-anna *rubbi* crop; and from other information I have received, I am inclined to think that the outturn will be even higher, as the Sub-Divisional Officer does not appear to have taken sufficiently into account the expansion of the area under *rubbi* this year.

16. The prospects in thanna Suti are not quite so favourable, especially in those villages where the people are chiefly dependent on the *haimunt* or *aman* rice crop. Yet I think that the ordinary labour supplied by the District Committee would grant sufficient relief here.

C.—17. There is a likelihood of some distress being felt later on in parts of the Mirzapore thanna, which lies in the Rarh country on the west bank of the Bhagiruthee. Generally speaking, the soil of this thanna is suitable for the production of one crop only—*aman* rice. The sub-divisional officer gives a list of twelve mouzals where he says this crop has entirely failed, and names nine more mouzabs where the failure is almost complete. Elsewhere in the thanna there is a fair crop, and indeed in many villages the outturn will be excellent. The people of the villages where the crop has failed have been obtaining employment on our district roads in that quarter, and many of them are now engaged as labourers in the work of reaping the rice elsewhere. It seems evident that we shall have to provide labour in some form for a certain number of persons in this thanna until next rainy season; but for the immediate present, quite enough is being done, as so many persons are finding employment in reaping the autumn rice. There, as elsewhere, there is a falling off in the number of labourers in our roads for this reason, and I think the number will not begin to increase again before February next.

18. Taking this sub-division as a whole, we expect a 5-anna *aman* crop at least; and so far the prospects of the *rubbi* crop are very good, and the sowings unusually extensive. So far as there has been serious failure of the rice crop, that failure has been confined to few villages only; and for the relief of the people affected, when relief becomes necessary district road work on a somewhat extended scale in comparison with other years will be sufficient, assuming that other forms of employment of labour and expenditure of money are not deemed by Government to be more desirable.

#### *Kandy sub-division.*

19. The following thannas are comprised within this sub-division:—

Kandy.	Khargaon.
Bharatpore.	Gokurn.

The whole of the sub-division lies on the western bank of the Bhagiruthee, and therefore in the country known as the Rarh. The principal crop of the year is the *aman* rice. There is very little *aus* cultivation, but in thannas Bharatpore and Gokurn the ratio of the relative importance of *rubbi* and *aman* is as 1 to 3. In thanna Khargaon the ratio is only as 1 to 7. I mention this fact here because the *rubbi* crop throughout the sub-division promises to yield an excellent outturn.

20. After taking into consideration the contraction of the area under *amun* rice this year, as well as the defective yield of what has been transplanted out, the sub-divisional officer has arrived at the following estimate regarding that crop:—

Thannas.	Annas.
Bharatpore ... ..	10½
Kandy ... ..	9
Khargaon ... ..	5
Gokurn ... ..	4

Mulberry is included along with the *rabbi* crops, and is very extensively grown in thannas Gokurn and Bharatpore, within each of which there are five silk filatures. The Sub-Divisional Officer nevertheless finds that employment will be necessary for five or six months from March next for about 24,000 persons. I am unable to accept his conclusions; as he begins by estimating the number who live by labour alone as one-third of the whole population—a very high estimate indeed for a thinly-populated tract of country; and in the next place he has included amongst those who must have labour all the women and children as well as the adult males. I shall endeavour to have a conference with this officer before the end of the present month in order that expression may be given to his views with greater precision and accuracy.

D.—21. It does, however, appear there will be a considerable supply of labour from thannas Gokurn and Kandy. In thannas Bharatpore and Khargaon there will also be some persons in need of employment, because, although the crop is good, in some villages it has failed, or almost failed in others. However, Gokurn and Kandy are the thannas that will need the most attention, but even here there is no immediate cause for anxiety, as it is not apprehended that any work to grant relief will be necessary before March next, and I further sincerely believe that none of us is in a position to say to what extent it will then be necessary to provide employment for the needy.

22. For the sake of convenience, I will here recapitulate the statement of the tracts likely to be most affected.

A—*Sudder division*.—The tract of country south from Berhampore, varying in breadth from three to five miles, lying along the east bank of the Bhagirathce river. This strip lies chiefly in the Burua thanna, but partly in Gorabazar.

B—*Lalbagh*.—Portions of the Kulliangunge thanna in the sub-division of Lalbagh, owing to the failure of the *amun* rice.

C—*Junjipore*.—Portions of thanna Mirzapore, where *amun* rice alone can be grown. In a considerable number of villages that crop has failed or is a partial failure.

D—*Kandy*.—Thannas Gokurn, Kandy and Khargaon within the Kandy sub-division, where, however, the extent to which labour will have to be provided still remains to be determined.

23. Outside these tracts there may be, and doubtless are, villages here and there where people reside, who will need labour later on. All, however, whom I have consulted, both officials and non-officials, are unanimous in thinking that at present there is no distress, and that it will not be necessary to give an expansion to the usual means of employment before March or, perhaps, February next. Meantime our observations can be continued and verified, and the extent to which employment will have to be provided can be determined. In support of my conclusion that at present ample means of employment are being provided on the district roads, I beg to submit a figured statement, showing the number of labourers on each of our roads under repairs day by day between the 10th and 25th of last month (November). It will be seen that, although the total number rose to 1,213 on the 18th, it fell off rapidly until the 25th, on which date only 436 persons were at work, and in considering this statement it should be borne in mind that, as I have previously stated, an able-bodied labourer can earn from 2½ to 4 annas a day working at the rates we pay. I attribute the falling off in the number of labourers to two causes—(1) the price of rice is gradually falling throughout the district, the rate for common rice in Berhampore being 14 seers for the rupee, and all other articles of food, especially wheat, are cheap; (2) the reaping of the *amun* rice crop has created a demand for labour, more particularly in the *kalantar* country, which lies in thanna Burua and Nowada, where there is a heavy crop; and the silk filatures are now everywhere being opened. For a few months, then, we may be free from anxiety.

24. Another figured statement appended to this report shows the expenditure on district roads up to date. From this it will be seen that over Rs. 6,000 have already been expended, of which almost Rs. 4,000 were paid away during November alone. The road cess fund of this district is a very small one in comparison with the burden it has to bear in all years, for this being an old district is very rich in roads. The amount available for public works each year is between Rs. 40,000 and Rs. 45,000 only, and out of this from Rs. 10,000 to Rs. 12,000 have to be reserved each year on maintaining the metalled road

from Berhampore to Jeagunge and Bhogwangola, and the repairs on that road can only be executed in the rainy season. We have thus less than Rs. 35,000 this year to expend on the cutcha roads, which are almost 700 miles in length. About one-fifth of this sum (less than Rs. 35,000) has already been expended; and if therefore there be a rush of labourers to the work we provide during and after February next our means will soon be exhausted. I think we must be prepared to meet a demand for employment very much in excess of that of other years, and it will be necessary to provide employment to relieve want among the labouring classes.

25. The Sub-Divisional Officers recommended the re-excavation of old tanks and the repairs of all our roads. In one or two cases it is recommended that new roads should be constructed. The agitators are mostly in favour of the construction of the Ranaghat-Bhogwangola Railway; but in my humble way I would deprecate the commencement of that work. So far as its industries are concerned, this is a declining district, and therefore the goods traffic over this line could not be but light. The population is not dense, and therefore the passenger traffic would not be heavy; and for five months of the year the line would have to compete with the river traffic on the Bhagiruthee to the west and the Jellinghee to the east. I will, however, grant that it might bear off some of the produce of the Rajshahye and Maldah districts.

But there is another objection. The completion of the work will be very costly. Assuming that it is conducted this year only so far as it is found necessary to keep relief works open, when may we hope for its completion? If it will not be possible to push on the work in subsequent years, there will be nothing to show for the expenditure but a heap of earth of no value, convenience, or utility whatsoever.

26. I therefore would respectfully beg to suggest that the district road fund be supplemented to such an extent as the actual requirements of the district, to be hereafter determined, would seem to justify. In consequence of the inadequacy of the district fund a great many useful roads have fallen into lamentable disrepair. The present year seems to be a most favourable opportunity for bringing these once more thoroughly into order. I would also recommend some expenditure on the re-excavation of old tanks, or on the excavation of new ones, and in connection with this subject I may refer to the relative state of the crops in thannas Sagardighee and Kulliangunge in the Lalbagh sub division. In the former thanna the prospects are tolerably good in consequence of irrigation from tanks; whereas the latter thanna is one of the tracts where want will be most felt, the reason being that all the tanks have silted up and irrigation from them was impossible. These two thannas lie north and south of each other.

27. Out of the funds of the Cossimbazar Estate under the Court of Wards, a sum of Rs. 2,424 will be expended over tanks and wells; and I purpose applying for sanction to expend a further sum of about Rs. 4,000 on the same object.

28. There is no reason to apprehend a scarcity of fodder. On the contrary, the supply will be abundant if we have a few showers of rain from time to time during the cold season and again in March, as there is more grazing land than usual. Cattle at present appear to be in fairly good condition.

29. There will be some difficulty felt later on as regards the water-supply, and this may affect injuriously the health of the public. For this there is little or no remedy, as tanks now excavated would be of no service until after the next rains, and wells would be little better. We must wait and hope for rain. Rain in February next would remove all anxiety under this head.

30. The stocks of old rice in the district are insignificant, even if we include the out-turn of the last *aus* crop. The *rubbi* crops, however, will compensate for this, if the yield be as good as we now have a right to expect it to be. At all events, there is no cause for entertaining anxiety as regards any quarter of the district for the next two months or so, and the apprehensions of the alarmists are, I think, subsiding. The *amun* crop is after all not so bad as was at one time anticipated. The *rubbi* is an excellent crop, taking the district as a whole; mulberry, too, is a good crop, although it certainly is selling very cheap: the price of rice is falling, and a further fall is expected, and all other food staples are cheap and plentiful.

31. I have observed that the first demand is not for labour, but for gratuitous relief, and in one place it was actually suggested to me that private distributions of food should be made from house to house. I can say with confidence that the circumstances which would justify the bestowal of gratuitous relief by Government are very remote indeed from the circumstances that do actually prevail. The District Superintendent, the Sub-Divisional Officers, and myself have endeavoured to stimulate the efforts of private charity, and there are indications to show that there has been some expansion. Of course, all who go daily to the Rajbati at Cossimbazar receive doles, and the number now is considerably greater than it was in former years. The majority of these, however, are professional beggars.

32. As there is no immediate cause for anxiety in this district, I would respectfully suggest that you permit me to submit the next report at the end of December, as there would be little, if anything more, to add at the middle of the month.

Statement showing the number of coolies employed from 10th to 25th November 1884, on the several district roads that are at present under repairs.

NAMES OF ROADS.	10th November.	11th November.	12th November.	13th November.	14th November.	15th November.	16th November.	17th November.	18th November.	19th November.	20th November.	21st November.	22nd November.	23rd November.	24th November.	25th November.
Baldanga to Muzumbar road...	4	8	5	18	15	2	4	8	5	20	24	18	6	6	4	...
Krishnagar road (from Berhampore to beyond Lokanathpore)...	191	171	173	200	140	240	311	332	169	169	161	246	244	192	20	...
Jellinghee road (from Chunar to Jellinghee)...	81	81	81	81	81	81	81	81	81	81	81	...	...	...	...	...
Baromann road (from Islampur to Lotli)...	20	20	20	20	20	20	20	20	20	20	20	...	...	...	...	...
Baramasia to Kailamari road...	18	18	18	18	18	18	18	18	18	18	18	...	...	...	...	...
Baramasia to Jellinghee road...	30	30	30	30	30	30	30	30	30	30	30	...	...	...	...	...
Kharwan to Farooli road...	34	34	27	31	37	40	25	9	3	...	...	...	...	18	17	...
Kandy road (from Haldighat to Kooli)...	81	84	87	133	174	313	338	385	412	17	60	79	84	85	73	78
Kooli to Hileram road...	19	25	25	24	29	27	10	23	12	...	16	16	7	13	13	14
Haldighat road...	...	7	7	...	...	...	...	...	...	...	...	...	...	...	...	...
Jungpore to Khamra road...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Ditto to Metrapore road...	65	48	81	62	...	58	...	69	44	36	69	34	34	48	47	20
Ditto to Bokra road...	167	202	227	...	119	...	121	165	214	202	116	82	105	104	104	68
Kandy to Bhakrigo road...	48	30	57	47	50	34	25	21	...	7	...	...	...	18	21	23
Kulu to Nowgram road...	...	...	...	...	3	...	...	15	...	21	21	...	10	23	13	13
Banmangur to Bhoolan road (towards Shalihar)...	...	...	...	...	...	...	...	...	111	207	167	162	138	147	90	54
Banmangur to Bhoolan road (Jungpore side)...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	36	55
Kandi to Panku road...	...	...	...	...	...	...	...	...	...	...	...	11	13	12	12	13
Bankura road (from Gorumara to Bankura)...	57	40	40	20	40	...	...	...	68	85	16	...	...	...	...	...
Old Calcutta road (from Patla to Bhupia)...	...	...	24	...	...	...	...	...	...	...	...	...	...	...	...	...
Patkubari road (from Gorumara to Patkubari)...	52	29	13	15	...	...	...	...	...	...	...	...	...	...	...	...
Patkubari to Patkubari road...	...	12	52	74	...	...	...	...	...	...	...	...	...	...	...	...
Village road from Nowgram to Baurua...	...	...	...	...	...	...	...	...	...	...	21	4	9	...	...	...
	355	433	503	529	509	903	1,108	1,180	1,313	971	945	714	679	502	503	403

\* Three four roads are being repaired by petty contractors. They did not report the exact number of coolies who worked each day. The average number of coolies as reported by them has therefore been shown.

S. K. PUNDIT,

District Engineer, Moorshedabad District.

Statement showing the expenditure incurred from the 1st of October to 29th November 1884 on the several district roads that are at present under repairs.

NAMES OF ROADS.	Amount allotted.	Amount expended on previous month (October).	Amount expended during the current month (November).	Total.
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
Bhogwanga road (from Berhampore to Bhogwanga and a branch to Jeagunghat)...	9,827 0 0	96 7 0	207 8 6	206 0 6
Jellinghee road (from Chunar to Jellinghee)...	1,457 0 0	...	...	203 15 2
Kandy road (from Kharwan to Kooli)...	1,400 0 0	325 6 6	434 8 9	404 7 9
Jungpore to Metrapore road...	542 0 0	221 3 0	243 4 8	24 12 0
Gorumara to Bankura road...	126 0 0	24 6 0	0 0 0	105 11 3
Banmangur to Bhoolan road...	1,400 0 0	...	...	438 5 3
Banmangur to Bhoolan road (towards Shalihar)...	1,313 0 0	1 2 0	205 12 0	204 13 0
Banmangur to Bhoolan road (Jungpore side)...	3,223 0 0	1 0 0	305 12 0	305 12 0
Kandi to Panku road...	1,483 0 0	...	...	36 14 9
Bankura road (from Gorumara to Bankura)...	142 0 0	5 11 3	60 14 0	64 0 4
Old Calcutta road (from Patla to Bhupia)...	230 0 0	...	...	67 7 9
Patkubari road (from Gorumara to Patkubari)...	241 0 0	17 2 8	18 9 0	36 11 6
Patkubari to Patkubari road...	1,048 0 0	...	...	339 12 0
Village road from Nowgram to Baurua...	1,771 0 0	332 13 0	344 1 0	277 14 0
	1,211 0 0	305 5 9	104 11 9	270 1 0
Banmangur road (from Banmangur to beyond Patkubari)...	434 0 0	...	...	1 8 3
Banmangur station roads...	810 0 0	...	...	14 15 6
Patkubari to Gorumara road...	810 0 0	3 2 0	...	2 2 0
Chandpur to Kankura road...	816 0 0	224 3 2	379 5 2	401 7 0
Kankura to Farooli road...	566 0 0	22 11 0	94 13 6	117 6 5
Kandi to Bhakrigo road...	957 0 0	24 1 9	25 7 0	99 8 0
Kulu to Nowgram road...	430 0 0	0 12 0	11 1 0	11 13 0
Jungpore to Bhakra road...	777 0 0	...	...	255 1 0
Arrol and Haldighat roads (thanna Barooah)...	390 0 0	...	...	18 0 0
Patkubari to Patkubari (thanna Kharwan)...	170 0 0	...	...	64 10 3
Nowgram to Kharwan and thence to Gokurn (thanna Kharwan)...	100 0 0	30 13 6	5 2 0	64 0 0
Mohammed to Jastari (thanna Gokurn)...	70 0 0	81 9 6	33 12 0	84 5 6
Gokurn village road (thanna Gokurn)...	40 0 0	11 14 3	14 2 3	26 1 9
Chandpur to Gokurn...	300 0 0	300 1 0	...	300 1 0
Chandpur village road...	40 0 0	40 2 0	...	40 2 0
Kandy to Panku road...	781 0 0	...	12 1 0	15 1 0
Total	23,329 0 0	2,337 15 2	3,093 11 0	6,476 10 9

S. K. PUNDIT,

District Engineer, Moorshedabad District.



*Extract from the District Superintendent's Inspection Memorandum of Azimgunge Outpost, dated 30th November 1884.*

This outpost is, roughly speaking, four miles square in area. It is essentially an *amun* dhan and *rubbi* country. *Amun*-dhan is grown very little, not one anna of the land under cultivation.

The head-constable, who knows the rest of Jellinghee, says that the land of the whole thanna is of the same description as that of his outpost.

*Amun*-dhan was sown to the same extent as in former years. The yield was, however, poor, owing to scanty rainfall, not more than 6 or 8 annas having been realized.

What little *amun* is grown is on bil lands and is good—not quite a bumper crop, but nearly so.

There is a deal of mulberry grown all over Jellinghee, and it is good.

About 1½ annas of the cultivated tract is under jute, which has been exceptionally good this year.

A very large amount of indigo is grown. The factories are:—

- |                |                    |
|----------------|--------------------|
| 1. Domkole.    | 4. Sahebrampore.   |
| 2. Subdulpore. | 5. Ramchundrapore. |
| 3. Katakopore. | 6. Hookahara.      |
| 7. Baramasia.  |                    |

All belong to Watson concern. The silk factories are:—

- |               |               |
|---------------|---------------|
| 1. Kaligunge. | 2. Faridpore. |
| 3. Bagdanga.  |               |

also belong to Watson and Company. These factories are managed by English gentlemen, who doubtless would bring to notice distress should there be any. The land, say, 12 annas of the thanna area which was under *amun*, is now under *rubbi*, and all the cold weather crops promise well.

About 3 annas of this 12 annas is, however, under *kalai* and *moogh*. Half has suffered severely from caterpillars "*soopokas*" and half was entirely destroyed by the late inundation. The latter lands have, however, been re-cultivated, and are now under *rubbi*.

The cultivators are said to be very hard up owing to the partial failure of the *amun* crop. Many have gone into Rajshahye for the *amun* harvest. Poor people go in ordinary years, but this year more than usual have gone. A few persons have applied to the police for work, and this has been provided for them on the roads. The head-constable says four or five came to him.

I have known them go as far as Mymensingh in search of work in ordinary years.  
2-12-84. H. FARRER.  
O. M.

I believe this is the case everywhere in the district, that those who wanted labour have found it on the roads.

H. FARRER.  
O. M.

† Kangals means a poor and helpless person.

H. FARRER.  
O. M.

The head-constable says that on Sundays a great many paupers come into Azimgunge to be fed. This year they are in excess of those of other years, and that women preponderate.

They are *Kangals*,† but have become weak and have taken to begging through want.

The death register of the outpost shows in 1884 up to date:—

January	...	83 deaths.
February	...	50 "
March	...	136 " (78 of them were from cholera).
April	...	176 " (143 from cholera).
May	...	59 " (22 from cholera).
June	...	21 " (cholera ceased).
July	...	29 " { ditto. 1 case small-pox.
August	...	41 " (fever prevailed).
September	...	32 " (ditto).
October	...	54 " (48 from fever).
November	...	60 " (only one from bowel-complaint; most from fever).

Rashomai Basu, the chief pleader of the munsif's court, was good enough to let me question him about the state of the country and crops.

He says that probably as soon as the *rubbi* is cut, all distress will vanish. He does not think any relief is or will be needed. He says that on Sundays 250, and on other days 100 *Kangals* come in for charity—about double the number in previous years. Private charity provides for these, and some go to Cassimbazar for the daily charity given to all-comers by the Rani Sarnomoyi.

He says that it is customary for the cultivators of Jellinghee to go to Rungpore and Rajshahye for the *amun* dhan harvest.

As far as I can see, the Government need not have the slightest anxiety about the thannas of Doulatabad, Gowa, and Jellinghee, regarding which I have made personal enquiries.

I also had a visit from Baboo Gopi Mohun Mukerji himself. This gentleman agreed in thinking there is little chance of any relief measures being needed.

No. 1763, dated Berhampore, the 3rd December 1884.

Memo. by—The Magistrate of Berhampore.

Copy forwarded to the Commissioner of the Presidency Division for information.

**EXEMPTION FROM RE-MEASUREMENT IN HER MAJESTY'S DOMINIONS OF BELGIAN VESSELS, THE TONNAGE OF WHICH IS DENOTED IN THE CERTIFICATES OF BELGIAN NATIONALITY OR REGISTRY ISSUED AFTER 1st JANUARY 1884.**

No. 2124, dated Calcutta, the 12th December 1884.

**NOTIFICATION**—By the Government of India, Department of Finance and Commerce.

The following Order in Council, exempting from re-measurement in Her Majesty's Dominions Belgian vessels, the tonnage of which is denoted in the certificates of Belgian nationality or registry issued after the 1st January 1884, is published for general information:—

**AT THE COURT OF BALMORAL.**

*The 17th day of October 1884.*

**PRESENT:**

**THE QUEEN'S MOST EXCELLENT MAJESTY IN COUNCIL.**

Whereas by "The Merchant Shipping Act Amendment Act, 1862," it is enacted that, whenever it is made to appear to Her Majesty that the rules concerning the measurement of tonnage of Merchant Ships for the time being in force under the principal Act have been adopted by the Government of any Foreign Country, and are in force in that Country, it shall be lawful for Her Majesty, by Order in Council, to direct that the ships of such Foreign Country shall be deemed to be of the tonnage denoted in their Certificates of Registry, or other national papers; and thereupon it shall no longer be necessary for such ships to be re-measured in any port or place in Her Majesty's Dominions, but such ships shall be deemed to be of the tonnage denoted in their Certificates of Registry, or other papers, in the same manner, to the same extent, and for the same purpose, in, to and for which the tonnage denoted in the Certificates of Registry of British ships is to be deemed the tonnage of such ships:

And whereas it has been made to appear to Her Majesty that the rules concerning the measurement of tonnage of Merchant Ships now in force under "The Merchant Shipping Act, 1854," have been adopted by the Government of His Majesty the King of the Belgians, with the exception of a slight difference in the mode of estimating the allowance for engine-room, and such rules are now in force in that Country, having come into operation on the 1st day of January 1884:

Her Majesty is hereby pleased, by and with the advice of Her Privy Council, to direct as follows:—

1. As regards sailing ships, that merchant sailing ships belonging to Belgium, the measurement whereof on or after the said 1st day of January 1884 shall have been ascertained and denoted in the Certificates of Registry, or other national papers of such sailing ships, testified by the dates thereof, shall be deemed to be of the tonnage denoted in such Certificates of Registry, or other national papers, in the same manner, and to the same extent, and for the same purpose, in, to and for which the tonnage denoted in the Certificates of Registry of British sailing ships is deemed to be the tonnage of such ships.
2. As regards steam-ships, that merchant ships belonging to Belgium which are propelled by steam or any other power requiring engine-room, the measurement whereof on or after the said 1st day of January 1884 shall have been ascertained and denoted in the Certificates of Registry, or other national papers of such steam-ships, testified by the dates thereof, shall be deemed to be of the tonnage denoted in such Certificates of Registry, or other national papers, in the same manner, and to the same extent, and for the same purpose, in, to and for which the tonnage denoted in the Certificates of Registry of British ships is deemed to be the tonnage of such ship, provided, nevertheless, that, if the owner or master of any such steam-ship desires the deduction for engine-room in such ship to be estimated under the rules for engine-room measurement and deduction applicable to British ships, instead of under the Belgian rules, the engine-room shall be measured, and the deductions calculated, according to the British Rules.

C. L. PEEL.

D. BARBOUR,

*Secretary to the Govt. of India.*

**RESOLUTION ON THE REPORT OF THE ADMINISTRATION OF  
THE HOOGHLY BRIDGE FOR THE YEAR ENDING  
31ST MARCH 1884.**

GOVERNMENT OF BENGAL.

PUBLIC WORKS DEPARTMENT—COMMUNICATIONS.

No. 2103C., dated Calcutta, the 17th December 1884.

**READ—**

Report of the administration of the Hooghly Bridge Trust for the year ending the 31st March 1884.

**Read again—**

Public Works Proceedings (A), Communications, for June 1883, Nos. 1 and 2, being the report of the administration of the Hooghly Bridge for the year 1882-83, together with the Resolution passed thereon.

**RESOLUTION.**—The actual receipts and expenditure on the Hooghly Bridge during the year 1883-84, as compared with the estimated amounts, were as follows:—

	Estimate.	Actual.	More.
	Rs.	Rs.	Rs.
Receipts	4,94,771	5,86,695	41,924
Expenditure	5,51,774	6,03,515	51,741

To the actual receipt of Rs. 5,36,695, a sum of Rs. 695 has been added in suspense account.

2. The aggregate of contributions, since 1874-75, towards the repayment of the original loan, amounted, at the close of the year, to Rs. 11,61,800, leaving a balance of Rs. 10,80,000 still unpaid. The Reserve Fund invested in Government securities amounted at the close of the year to Rs. 5,37,176. There was a cash balance of Rs. 31,433, and stock of the value of Rs. 1,08,761 has been provided as a reserve in case of an accident happening to the bridge.

3. The excess in expenditure was caused by contributing a larger sum than was estimated in repayment of the original loan. The receipts from Railway traffic were in excess of the actual receipts of the previous year. There was no increase in the schedule of rates, and the difference was entirely due to an increase in the quantity of goods carried. The receipts from local traffic were also above the amount realized from that source during the previous year, owing to the enhanced rate at which the tolls were let for the year under review. The following are the comparative figures for the two years:—

	1882-83.	1883-84.	
	Actuals.	Estimated.	Actuals.
	Rs.	Rs.	Rs.
Railway traffic	3,25,556	3,30,000	3,75,500
Local ditto	1,11,813	1,21,200	1,22,200

4. The lease of the bridge tolls to Baboo Hurdial Marwaree expired on the 29th February 1884, and has been renewed for another year, the lessee paying the Commissioners Rs. 11,100 monthly.

5. The Steamer *Buckland* was employed in crossing the passenger traffic on the days when the bridge was opened to allow vessels to pass through. The steam tug *Hetty*, having been in dock during a portion of the year, was not available during that time for towing vessels through the Bridge.

6. No accidents occurred in passing sea-going vessels through the opening of the bridge, but 140 other vessels, including 127 boats carrying country cargo and passengers, collided with the bridge. None of the collisions, however, were of a serious nature, nor was there, so far as could be ascertained, any loss of life.

7. A petition signed by 6,642 persons asking for a reconsideration of the Commissioners' former decision not to allow the street tramway to be carried across the bridge was presented to the Commissioners in November 1883.

The question was again carefully considered, but the Commissioners were unable to alter their previous decision, refusing to allow such a tramway to be established.

8. During the year under review, the proposals of the Howrah Municipality regarding the construction, on the north side of the bridge approaches, of a road leading to the ghât at the Howrah abutment of the bridge were communicated to the Commissioners by Government. The Municipality suggested that a piece of land to the north of that which had been occupied by the quarters of the bridge officers should be taken up for a new approach road to the river, and that the payment of compensation might be obviated by inducing the owners of the land proposed to be taken to accept, in exchange, a strip of equal area of the land attached to the Port Commissioners' dock, which adjoins. It was found, however, that the suggestion of the Municipality would not be a convenient arrangement for Messrs. Ahmuty & Co., the owners of the land adjoining the bridge, it being used by them as a slip-way for hauling up boats; and an alternative plan, which would give access to the ghât, was then suggested by the Commissioners. They proposed that, in order to set the whole of the road to the south of the bridge free for the use of passengers and bathers, a piece of land belonging to the Commissioners should be made over to the Municipality for use either as a carriage stand, dépôt for stone metal, or for any other purpose found suitable. They also offered to open the archway under the bridge abutment, which is at present enclosed and used for the storage of timber and bridge stores, and to make it available as a passage to the bathing ghât on the north side of the bridge, which could then be set apart exclusively for the use of females. The Municipality and Government agreed to these suggestions, and the necessary alterations to make the ghât to the north of the bridge abutment suitable for native women are now being carried out. This matter has been the source of much correspondence during past years, and it is satisfactory that it has now been settled in a manner agreeable to all the parties interested in the result.

9. The question of readjusting the terminal charges collected on railway-borne goods at Howrah on account of the bridge was considered during the year under review. In February 1884 a conference was held at Howrah to discuss certain matters at issue between the Port Commissioners and the East Indian Railway Company. It was then proposed that, in consideration of certain concessions to be made to the Railway Company regarding dues on railway-borne goods on the Shalimar frontage, the terminal of Rs. 1 per 100 maunds should be divided between the Port Commissioners and Bridge Commissioners, and that subsequent to the liquidation of the bridge debt, a terminal payable to the Port Commissioners should be maintained in lieu of frontage dues. The division of the present terminal has been sanctioned by Government, subject to the balance remaining to the bridge being sufficient to yield a surplus available for the payment of the annual sum of Rs. 73,333 towards the sinking fund of the bridge debt. When the debt is liquidated, a terminal wharfage charge will be levied in a manner to be determined hereafter.

ORDER.—Ordered that a copy of this Resolution be forwarded to the Bridge Commissioners for information.

Ordered also that this Resolution be published, for general information, in the Supplement of the *Calcutta Gazette*.

By order of the Lieutenant-Governor of Bengal,

S. T. TREVOR, Colonel, R.E.,

Secretary to the Government of Bengal.

## Rainfall, Weather, and State and Prospects of the Crops.

Statement showing Rainfall, Weather, and State and Prospects of the Crops in the different Districts of Bengal, as reported to Government during the week ending the 20th December 1884.

No.	District, and date of return.	Rainfall at Sudder Station in inches.	Character of the weather, state and prospects of the crops, and state of health at date.
<b>BENGAL.</b>			
<i>Western Districts.</i>			
<b>BURDWAN DIV.</b>	1 Burdwan, Dec. 20 '84	Nil	Weather—seasonable. <i>Amun</i> paddy is still being harvested. <i>Rubbee</i> crops and sugarcane are promising. Common rice is generally selling at from 16 to 17 seers per rupee. General health good, a few cases of cholera and small-pox are reported from two places.
	2 Bankura, " 20 "	Nil	Weather—bright and seasonable. <i>Amun</i> paddy is still being cut. Prospects of <i>rubbee</i> crops good. Price of common rice varies from 17 to 22 seers per rupee. General health good except that fever continues here and there.
	3 Beerbhoom, " 20 "	Nil	Weather—cold and fine. <i>Amun</i> paddy is being harvested. Sugarcane and other <i>rubbee</i> crops are doing well. Food-grains cheaper. Cases of cholera are reported, general health otherwise satisfactory.
	4 Midnapore, " 20 "	Nil	Weather—seasonable. <i>Amun</i> paddy is giving an excellent yield. Prospects of cold-weather crops generally good. Sporadic cases of cholera and small-pox are still reported.
	5 Hooghly, " 20 "	Nil	Weather—seasonable. <i>Amun</i> paddy all over the district appears to be a 12-anna crop. Winter crops, potatoes, sugarcane, &c., are all doing very well. Fever prevails in various parts of the district, and there are also a few cases of cholera reported.
	Howrah, " 22 "	Nil	Weather—seasonable. The outturn of paddy is a full one. In <i>Coloobaria</i> an almost sixteen-anna crop is expected. Winter crops are all doing well.
<i>Central Districts.</i>			
<b>PRESDENCY DIV.</b>	6 24-Pargha, Dec. 22 '84	Nil	Weather—seasonable. Prospects of <i>amun</i> paddy continue satisfactory. <i>Rubbee</i> crops are doing well. Public health generally good. Isolated cases of cholera are reported from the <i>Buirhat</i> and <i>Diamond Harbour</i> sub-divisions.
	7 Nudda, " 20 "	Nil	Weather—seasonable. Prospects of crops good.
	8 Khoolna, " 20 "	Nil	Weather—cool. Harvesting of paddy going on satisfactorily. Cholera in some places, otherwise public health fair.
	9 Jessore, " 20 "	Nil	Weather—seasonable. <i>Amun</i> paddy is still being harvested, prospects favourable. Winter crops are doing well. Cases of cholera and fever are reported here and there.
<b>RANSHATE DIV.</b>	10 Moorsheadabad, " 20 "	Nil	Weather—seasonable most part of the week, cloudy and warm again at the close. Reaping of <i>amun</i> paddy still continues; the outturn on an average for the district will not be far short of an eight-anna crop. All <i>rubbee</i> crops are doing well except <i>kafai</i> , which has been damaged to some extent by caterpillars. Some light rain is wanted for these crops. Common rice selling at from 14 seers in the <i>Lalbagh</i> to 19 seers in the <i>Jangipore</i> sub-division. Public health good except in the <i>Nowada</i> thana, where cholera prevails.
	11 Dinagore, Dec. 19 '84	0.5	Weather—seasonable. Harvesting of <i>amun</i> paddy and sugarcane continues, a fair outturn is expected. State of <i>rubbee</i> crops is good. Rice selling at from 12 to 18 seers per rupee.
	12 Bajesahye, " 23 "	Nil	Weather—seasonable. Cutting of <i>amun</i> paddy continues. <i>Rubbee</i> crops generally promising. Health fair.
	13 Rungpore, " 20 "	Nil	Weather—seasonable. Harvesting of <i>amun</i> paddy still continues, outturn short. Sugarcane, mustard and other <i>rubbee</i> crops are doing well. Fever and cholera seem to be abating.
	14 Bogra, " 20 "	Nil	Weather—getting colder. Prospects of winter crops fair. <i>Amun</i> paddy is being reaped. Public health fairly good.
	15 Pubna, " 19 "	Nil	Weather—cold. Crops on the ground are reported to be healthy.
	16 Darjeeling, " " "	.....	Not received.
	17 Tulpigore, " 20 "	Nil	Weather—seasonable. <i>Haimanti</i> paddy is being cut, the outturn will be below the average. Cold-weather crops are all doing well. Tobacco is very promising in the <i>Alipore</i> sub-division. Ordinary rice is selling at from 15 to 17 seers per rupee. Public health good.
<i>Eastern Districts.</i>			
<b>DACCA DIV.</b>	18 Dacca, Dec. 20 '84	Nil	Weather—cold. Harvesting of <i>amun</i> paddy nearly completed; outturn good. Sugarcane is being cut. Sowing of pulses and <i>boro</i> paddy continues. Prospects of crops good. Public health good.
	19 Farreedpore, " 20 "	Nil	Weather—clear and cool. State of standing crops is good. Prices falling. Cholera abating.
	20 Backergunge, " 18 "	Nil	Weather—seasonable. <i>Amun</i> paddy is being reaped. Fever has abated; but cholera still prevails in some parts of the district.
	21 Mymensingh, " 19 "	Nil	Weather—cool and pleasant with occasional fog. Harvesting of paddy going on briskly. Prospects of cold-weather crops excellent.



No.	District, and date of return.	Rainfall at Sudder Station in inches.	Character of the weather, state and prospects of the crops, and state of health at date.
<b>BENGAL.—consolid.</b>			
<i>Eastern Districts.</i>			
<b>CHITTAGONG DIV.</b>	22 Chittagong, Dec. 22 '84	Nil	Weather—fair and cold. Prospects of crops good. Harvesting of <i>amun</i> paddy continues with about a twelve-anna outturn. Prices of food-grains somewhat low. Cholera continues.
	23 Noakhally, " 19 "	Nil	Weather—clear and seasonable. <i>Amun</i> paddy is being reaped. Sowing of <i>rubbee</i> crops still continues. Cholera reported from the interior.
	24 Tipperah, " 18 "	Nil	Weather—generally cool and clear, misty in the mornings. Harvesting of <i>amun</i> paddy continues, outturn generally favourable. Prices of food-grains nearly stationary. Cholera prevalent, otherwise public health good.
	25 Chittagong Hill Tracts, " 16 "	Nil	Weather—seasonable, foggy in the mornings. Cotton-picking is over. Prospects of mustard, sugarcane and plough-paddy good. Plough-paddy is being harvested; tobacco transplanted.
	Hill Tipperah, " 17 "	Nil	Weather—seasonably cool, <i>Amun</i> paddy is still being reaped. <i>Til</i> and cotton are being collected. Chillies and tobacco doing well. Public health good.
<b>BEHAR.</b>			
<b>PATNA DIV.</b>	26 Patna, Dec. 20 '84	Nil	Weather—seasonable. Reaping of paddy and <i>jowar</i> still continues. <i>Rubbee</i> crops growing well. Gram, pulses and linseed are flowering. Prospects of poppy crop are at present favourable. Public health good.
	27 Gya, " 20 "	Nil	Weather—cool and dry with heavy dew. Sugarcane and paddy are being harvested with good results. <i>Rubbee</i> and poppy crops promise well. Public health good.
	28 Shahabad, " 19 "	Nil	Weather—cool. Prospects of <i>rubbee</i> crops favourable. Pressing of sugarcane in progress. Poppy crop is promising and is well advanced for the season.
	29 Durbhanga, " 20 "	Nil	Weather—calm and cool. Paddy is being harvested. <i>Rubbee</i> crops continue promising, but rain is wanted in some parts. Poppy and tobacco doing well. Price of rice stationary, that of other food-grains slightly decreasing. Public health good.
	30 Mozafferpore, " 19 "	Nil	Weather—seasonable with slight west winds. Harvesting of paddy going on all over the district. A moderate yield is expected. Prospects of <i>rubbee</i> crops continue good. Condition of poppy crop is reported to be favourable, and the plants are looking healthy and strong everywhere.
<b>BHAGALPORE DIV.</b>	31 Saran, " 20 "	Nil	Weather—fair and cold. Harvesting of paddy going on briskly. <i>Rubbee</i> crops continue to be promising. Gram, pulses and linseed are flowering. Prospects of poppy crop excellent, weeding in progress. Prices of food-grains falling. Public health good.
	32 Champaran, " 20 "	Nil	Weather—seasonable. Prospects of standing crops continue favourable. Paddy is being reaped. Condition of the poppy crop is excellent, young plants are looking very healthy. Public health fair. Cases of fever in the interior.
	33 Monghyr, Dec. 20 '84	Nil	Weather—seasonable. Paddy is being reaped. Prospects of <i>rubbee</i> crops continue good. Prices falling. Prospects of poppy crop good. Public health good.
	34 Bhagulpore, " 20 "	Nil	Weather—seasonable. Paddy is being reaped. <i>Rubbee</i> crops doing well everywhere. Price of rice 15 seers per rupee in south and 19 in north. Public health good.
	35 Purneah, " 20 "	Nil	Weather—fine and seasonable, but some rain would be very beneficial now. Prospects of winter crops generally very good, particularly in the Kishanganj sub-division. Outturn of <i>aghani</i> paddy in the Sudder sub-division will be very small.
<b>ORISSA DIV.</b>	36 Maldah, " 20 "	Nil	Weather—cold in the mornings, and strong, cool, westerly breeze in the evenings. Harvesting of winter paddy continues; average outturn about eight annas. Prospects of <i>rubbee</i> crops generally fair. Common rice is selling at from 13 to 14 seers per rupee. General health good.
	37 Borthal Perga, " 20 "	Nil	Weather—clear and cold. Cutting of <i>aghani</i> paddy is very well advanced. Mustard is being gathered in places. Prospects of <i>rubbee</i> crops continue good. Public health good.
<b>ORISSA.</b>			
<b>ORISSA DIV.</b>	38 Cuttack, Dec. 19 '84	Nil	Weather—cold and clear. <i>Sarad</i> on low lands is being harvested with fair outturn. <i>Rubbee</i> crops doing well. Sugarcane is being cut and pressed. Common rice selling at from 16 to 20 seers per rupee in the town and 24 seers on an average in the interior. Public health generally good.
	39 Pooree, " 18 "	Nil	Weather—seasonable. <i>Sarad</i> is being harvested. State of <i>dalma</i> crop good. Mustard is being reaped. Miscellaneous crops doing well. Common rice selling at an average of 23 seers 9 chittacks per rupee in the Sudder sub-division, and 25 seers 7 chittacks in the Khorda sub-division. Cholera still reported.
	40 Balasore, " 18 "	Nil	Weather—cold and clear. Reaping of <i>sarad</i> in progress. <i>Rubbee</i> crops doing well. Sporadic cases of cholera and fever are reported from the interior; otherwise public health good.
<b>CHOTA NAGPORE.</b>			
<b>CHOTA NAGPORE.</b>	<i>South-West Frontier Agency.</i>		
	41 Hazaribagh, Dec. 19 '84	Nil	Weather—bright and cold. Harvesting of paddy continues. Prospects of <i>rubbee</i> crops generally good. Young poppy plants healthy in places in which they are sufficiently watered, but they are yellow and drying in places where there are no facilities for irrigation. Prices almost stationary. A few cases of small-pox are still reported from the interior, otherwise general health good.
	42 Lohardugga, " 19 "	Nil	Weather—cold. Prospects of <i>rubbee</i> crops good on the whole, though rain is slightly wanted in the Palamou sub-division. Prices stationary. Public health good.
	43 Singhbhum, " 19 "	Nil	Weather—seasonable. Harvesting of late paddy completed in some parts of the district and continues elsewhere; outturn excellent. Cold-weather crops are doing well. General health good.
	44 Manbhum, " 20 "	Nil	Weather—seasonable; but slightly warmer than usual in this month. Harvesting of paddy continues; outturn somewhat indifferent; prospects of other crops fair; price of coarse rice 23 seers per rupee in the Furulia market. Public health good.

Published for general information.

CALCUTTA, STATISTICAL DEPT.,  
The 23rd December 1884.COLMAN MACAULAY,  
Secy. to the Govt. of Bengal.

## PRICES-CURRENT of Food-grains, Firewood and Salt in the

Number.		DISTRICTS.	RETAIL SALE:—QUANTITIES PER RUPEE BY																							
			WHEAT.			BARLEY.			RICE, BEST SORT.			RICE, COMMON.			DELTAH MILLET— CUMBOO, RAJRA.			GRASS MILLET— CHOLU JOWAR.								
			Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.						
BENGAL.																										
Western Districts.																										
1	Burdwan	16 0	16 0	15 8	37 0	33 0	30 0	11 8	11 8	13 12	16 0	16 0	19 0	...	...	...	...	...	...	...	...	...	...	...	...	
2	Bankura	15 8	15 0	14 8	16 0	16 0	17 0	14 8	14 13	14 0	17 0	16 13	16 0	...	...	...	...	...	...	...	...	...	...	...	...	
3	Bankura	16 0	16 8	15 0	...	...	...	14 0	14 0	15 0	16 0	16 0	16 0	...	...	...	...	...	...	...	...	...	...	...	...	
4	Midnapore	14 0	12 0	12 0	30 0	30 0	16 0	16 0	14 0	11 8	18 0	16 0	16 0	...	...	...	...	...	...	...	...	...	...	...	...	
5	Hooghly	16 0	16 0	14 0	...	...	...	9 0	9 0	8 0	13 0	13 0	13 0	...	...	...	...	...	...	...	...	...	...	...	...	
6	Howrah	15 4	15 0	13 8	...	...	...	11 0	11 0	12 8	14 8	13 4	14 8	...	...	...	...	...	...	...	...	...	...	...	...	
Central Districts.																										
7	Calcutta	16 0	17 10	12 0	20 0	30 0	16 0	8 4	8 0	7 0	10 8	10 8	11 0	13 0	11 8	16 0	11 7	11 7	20 0	...	...	...	...	...	...	
8	24 Parganas	16 0	16 0	13 5	18 0	30 0	16 0	8 0	8 0	8 0	20 0	20 0	13 0	...	...	...	...	...	...	...	...	...	...	...	...	
9	Nadia	17 4	17 4	15 4	22 16	31 5	...	12 13	11 9	12 5	13 14	13 5	13 14	...	...	...	...	...	...	...	...	...	...	...	...	
10	Khoulia	...	...	...	...	...	...	14 0	13 0	12 0	16 0	16 0	14 0	...	...	...	...	...	...	...	...	...	...	...	...	
11	Jessore	13 0	13 6	12 5	...	...	...	11 8	11 0	11 8	10 0	8 0	14 8	...	...	...	...	...	...	...	...	...	...	...	...	
12	Moorshedabad	17 0	18 0	16 0	...	...	...	13 0	10 0	12 0	16 0	14 0	16 0	...	...	...	...	...	...	...	...	...	...	...	...	
13	Dinapore	16 12	16 12	15 8	16 13	16 0	16 8	13 8	10 13	13 0	13 0	13 4	16 0	...	...	...	...	...	...	...	...	...	...	...	...	
14	Rajshahi	16 8 to 17 4	16 14	15 12 to 16 8	19 8	31 0	20 4	14 0 <sup>a</sup> to 15 0	8 0 to 10 12	10 8 to 10 12	16 5 <sup>a</sup> to 17 4	16 5 to 17 4	13 4	...	...	...	...	...	...	...	...	...	...	...	...	
15	Rangpur	13 0	13 0	10 0	...	...	...	7 0	7 0	8 10	11 0	11 0	13 5	...	...	...	...	...	...	...	...	...	...	...	...	
16	Bogra	13 8	13 8	14 0	...	...	...	9 13	9 13	9 13	17 4 <sup>a</sup>	12 13	16 8	...	...	...	...	...	...	...	...	...	...	...	...	
17	Pahna	17 13	13 13	13 13	...	...	...	8 4	8 4	7 8	14 4	14 4	15 0	...	...	...	...	...	...	...	...	...	...	...	...	
18	Darjeeling	10 0	10 0	7 0	7 0	9 0	7 0	8 0	8 0	8 0	12 0	11 0	11 0	...	...	...	...	...	...	...	...	...	...	...	...	
19	Jalpigore	11 0	10 0	10 0	...	...	20 0	11 0	10 0	9 0	16 0 <sup>a</sup>	12 0	14 0	...	...	...	...	...	...	...	...	...	...	...	...	
Eastern Districts.																										
20	Dacca	14 8	13 0	14 8	22 0	16 0	15 0	15 0 <sup>a</sup>	11 0	12 0	16 0	14 0	13 13	...	...	...	...	...	...	...	...	...	...	...	...	
21	Farmedpore	20 0	20 0	22 0	34 0	34 0	30 0	11 0	11 0	12 8	13 0	12 0	15 0	...	...	...	...	...	...	...	...	...	...	...	...	
22	Backergunge	...	...	...	...	...	...	13 4	12 12	13 0	18 0 <sup>a</sup>	14 12	16 0	...	...	...	...	...	...	...	...	...	...	...	...	
23	Mymensingh	13 0	13 4	12 8	...	...	...	10 0	10 4	10 0	13 4	12 8	14 8	...	...	...	...	...	...	...	...	...	...	...	...	

\* The supply of new rice now coming into the market has caused the fall in price.

A In the sub-divisions the retail price of salt per rupee were:—Culina 14 seers, Onawa 12 seers, and Rangpur 13½ seers.

B The retail price of salt ranged in the interior from 12 to 16 seers per rupee.

B1 The retail price of salt in the interior ranged from 11½ to 13½ seers per rupee.

B2 In the sub-divisions the retail prices of salt per rupee were:—Dihattal 14½ seers and Contai 13½ seers.

C In the sub-divisions the retail prices of salt per rupee were:—Baranpore 12 seers and Jhannabad 13½ seers.

D In the sub-divisions the retail prices of salt per rupee were:—Baranpore 12 seers, Baranpore 12½ seers, and Dam-Dum 12 seers.

E In the sub-divisions the retail prices of salt per rupee were:—Koushtia 13 seers, Muharpore 12 seers, Choudaugh 13½ seers, and Itanaghat 11½ seers.

F In the sub-divisions of Bakshira and Baghat the retail price of salt was 11 seers per rupee.

G In the sub-divisions the retail price of salt per rupee were:—Kandish and Nawa 12 seers, Magora 10½ seers, and Rangpur 13 seers.

## Districts of Bengal for the Fortnight ending the 15th December 1884.

THE BEER OF 80 TOLAHS.																		WHOLESALE PRICES PER MAUND OF 40 SEERS.			DISTRICTS
LASSER MILLET— RAGI OR MURWA AND CHENNA.			MAISE OR INDIAN- CORN.			GRAM.			FIREWOOD.			SALT.			SALT.						
Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.				
S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	Rs. A.	Rs. A.	Rs. A.				
...	...	...	...	...	...	18 0	18 0	18 0	120 0	120 0	120 0	13 8	13 0	13 0	3-14-0	3-14-8	3-15-0	Burdwan.			
...	...	...	95 0	95 0	95 0	18 0	18 0	17 0	240 0	240 0	280 0	13 0	13 0	13 0	3 0	3-1-0	3-3-0	Bankoora.			
...	...	...	...	...	...	16 0	16 0	16 0	160 0	160 0	160 0	12 0	12 0	12 0	3-2-0	3-2-0	3-2-0	Beerboom.			
...	...	...	...	...	...	16 0	16 0	16 0	155 0	155 0	145 0	12 12	12 12	12 8	3 0	3 0	3 14	Midnapore.			
...	...	...	...	...	...	16 0	16 0	16 0	120 0	120 0	120 0	13 9	13 9	13 9	3 14	3 14	3 14	Hooghly.			
...	...	...	...	...	...	17 8	17 8	17 0	80 0	80 0	80 0	13 0	13 0	13 0	3 0	3 0	3 0	Howrah.			
Western Districts.																					
...	...	...	31 10	31 8	18 0	19 11	19 11	13 0	100 0	100 0	90 0	12 13	12 13	11 0	3 0	3 12	3 12	Calcutta.			
...	...	...	31 4	24 8	10 0	18 4	20 0	16 0	100 0	100 0	80 0	12 13	12 13	12 13	3 0	3 0	3 0	24-Pergunnahs.			
...	...	...	...	...	...	21 5½	21 5½	16 12	...	...	...	11 10½	11 10½	11 10½	3 0	3 0	3 0	Nudda.			
...	...	...	...	...	...	16 0	16 0	16 0	200 0	200 0	200 0	12 0	12 0	10 8	3 2	3 2	3 4	Khoolna.			
...	...	...	...	...	...	16 0	16 0	16 0	120 0	120 0	120 0	11 8	11 12	10 12	3 2	3 2	3 2	Jessore.			
...	...	...	...	...	...	20 0	20 0	18 0	120 0	120 0	120 0	12 0	12 0	10 10	3-1-3	3-1-3	3 2	Monsheerabad.			
...	...	...	...	...	...	16 0	16 0	16 0	180 0	180 0	180 0	13 8	12 0	12 0	3 2	3 4	3 4	Dinapore.			
...	...	...	...	...	...	18 0	17 4	18 8	240 0	240 0	240 0	12 12	12 12	12 0	3 0	3 0	3-2-0	Rajahmundry.			
...	...	...	...	...	...	19 3	19 4	18 8	240 0	240 0	240 0	12 12	12 12	12 0	3 0	3 0	3-2-0	Rajahmundry.			
...	...	...	...	...	...	19 12	19 12	16 0	110 0	110 0	110 0	10 0	11 14	11 14	4 0	3 8	3 6	Kargpore.			
...	...	...	...	...	...	15 0	15 0	13 8	90 0	90 0	67 8	12 0	12 0	12 0	3-5-4	3-5-4	3-5-8	Bogra.			
...	...	...	...	...	...	17 0	17 0	15 12	200 0	200 0	200 0	12 6	12 6	12 4	3 1	3 1	3 2	Pabna.			
13 0	14 0	13 0	24 0	18 0	16 0	8 0	8 0	8 0	16 0	160 0	128 0	8 0	8 0	8 0	4 4	4 4	4 0	Darjeeling.			
...	...	...	...	...	...	16 0	16 0	13 0	125 0	125 0	125 0	12 4	12 4	12 4	3 4	3 4	3 4	Jalpigore.			
Eastern Districts.																					
...	...	...	...	...	...	17 0	13 0	17 8	120 0	80 0	97 0	13 5	13 0	13 10	3 0	3 0	3 2	Dacca.			
...	...	...	...	...	...	16 0	16 0	20 0	120 0	120 0	120 0	12 0	12 0	12 0	3 2	3 2	3 5	Farraopore.			
...	...	...	...	...	...	16 4	16 4	17 0	120 0	120 0	120 0	13 0	13 0	13 0	3 2	2 11	2 11	Bachiganje.			
...	...	...	...	...	...	14 0	15 0	16 0	...	...	...	12 12	12 8	12 4	3 2	3 2	3 4	Mymensingh.			

H In the sub-divisions the retail prices of salt per rupee were:—Lalbagh 11 seers, Jangipore and Kandi 12 seers.

I The retail price of salt at Itanagar was 11½ seers and at Nisipore 10 seers per rupee.

J In the sub-divisions of Naitore and Nowgong the retail price of salt was 12 seers per rupee.

K In the sub-divisions the retail prices of salt per rupee were:—Kurigram and Guibanda 13 seers, and Nilphamari 12 seers.

L The retail price of salt at Barajunge was 12½ seers per rupee.

M In the sub-divisions the retail prices of salt per rupee were:—Manickganje 12 seers, Mounshiganje 10 seers and 10½ ghitracks, and Narainganje 14 seers.

N In the sub-divisions the retail prices of salt per rupee were:—Moulundo 13 seers, and Madaripur 12 seers.

O In the sub-divisions the retail prices of salt per rupee were:—Patuakhali 10½ seers, Perampore 11 seers, and Bhola 10½ seers.

P In the interior the retail price of salt ranged from 10½ to 13½ seers per rupee.

## PRICES-CURRENT of Food-grains, Firewood and Salt in the

Number.	DISTRICTS.	RETAIL SALE :—QUANTITIES PER RUPEE BY THE														
		WHEAT.			BARLEY.			RICE, BEST SORT.			RICE, COMMON.			BULBUSH MILLST— LUMBOO, BAJRA.		
		Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.

## Eastern Districts.—Continued.

		4. Ch.	8. Ch.	8. Ch.	8. Ch.	8. Ch.	8. Ch.	8. Ch.	8. Ch.	8. Ch.	8. Ch.	8. Ch.	8. Ch.	8. Ch.	8. Ch.	8. Ch.
22	Chittagong	16 0	15 0	11 0	...	...	...	14 0	13 0	13 0	13 0	13 0	13 0	...	...	...
23	Noakholly	...	...	...	...	...	...	14 0	13 0	13 0	13 0	13 0	13 0	...	...	...
24	Tippurah	12 4	12 0	13 4	...	...	...	13 0	12 8	10 0	12 14	12 14	12 0	...	...	...
25	Chittagong Hill Tract.	...	...	...	...	...	...	13 0	11 7	...	12 0	12 4	...	...	...	...
26	Hill Tipperah	12 0	12 0	10 0	...	...	...	13 0	12 0	14 0	13 0	13 0	13 0	...	...	...

## BEHAR.

		2. Ch.	8. Ch.	8. Ch.	8. Ch.	8. Ch.	8. Ch.	8. Ch.	8. Ch.	8. Ch.	8. Ch.	8. Ch.	8. Ch.	8. Ch.	8. Ch.	8. Ch.
27	Patna	22 0	24 0	18 8	22 0	22 0	25 8	10 8	10 8	12 0	21 0	18 0	18 0	...	...	...
28	Gya	17 8	17 12	17 0	22 0	22 0	20 0	8 8	8 12	11 0	14 0	14 8	14 0	...	...	...
29	Shahabad	18 0	18 0	18 0	24 0	22 0	23 0	8 0	8 0	9 0	13 0	13 0	13 0	34 0	33 0	33 0
30	Darbhanga	19 14	16 12	16 0	26 0	23 0	23 0	12 8	15 0	11 8	10 2	17 10	14 0	...	...	...
31	Moradpur	20 0	18 0	18 0	23 0	20 0	26 0	11 0	11 0	9 0	13 0	16 0	13 0	...	...	...
32	Sargol	20 8	20 0	17 0	23 0	23 0	23 0	8 4	8 0	9 0	13 0	16 8	13 8	35 0	35 0	32 0
33	Champan	16 0	16 8	18 0	20 0	...	...	12 0	12 0	10 0	16 8	18 0	17 0	...	...	...
34	Monghyr	23 1	23 1	17 12	16 12	22 0	21 0	10 8	10 8	11 0	16 12	14 12	12 8	...	...	...
35	Bhagalpur	20 12	18 8	16 12	20 8	20 8	20 8	10 11	10 11	11 14	13 14	13 14	13 14	...	...	...
36	Purneah	17 0	16 0	14 0	...	...	...	13 0	13 0	16 0	13 0	16 0	16 0	...	...	...
37	Maidah	19 0	20 0	18 0	...	...	...	11 8	10 12	12 0	14 0	13 4	13 0	...	...	...
38	Southal Parga	15 0	16 0	14 0	...	...	...	12 0	12 0	12 0	15 8	16 0	16 0	...	...	...

## ORISSA.

		2. Ch.	8. Ch.	8. Ch.	8. Ch.	8. Ch.	8. Ch.	8. Ch.	8. Ch.	8. Ch.	8. Ch.	8. Ch.	8. Ch.	8. Ch.	8. Ch.	8. Ch.
39	Cuttack	21 0	21 0	12 8	...	...	...	13 8	13 8	13 8	13 6	13 8	13 8	...	...	...
40	Pooree	17 1	15 12	10 8	...	...	...	13 8	11 12	14 7	17 1	19 0	19 11	...	...	...
41	Balsore	15 8	16 0	14 0	11 0	11 0	...	13 0	13 0	16 0	23 0	24 0	21 0	...	...	...

## CHOTA NAGPORE.

## South-Western Frontier Agency.

		2. Ch.	8. Ch.	8. Ch.	8. Ch.	8. Ch.	8. Ch.	8. Ch.	8. Ch.	8. Ch.	8. Ch.	8. Ch.	8. Ch.	8. Ch.	8. Ch.	8. Ch.
42	Hamarabagh	15 8	14 0	15 0	...	...	...	12 0	12 0	9 0	13 0	13 0	15 0	...	...	...
43	Lohardugga	14 0	14 0	14 0	...	...	...	16 0	16 0	16 0	21 0	21 0	19 0	...	...	...
44	Singhbhum	18 8	16 0	16 0	20 0	20 0	24 0	20 0	20 0	23 0	24 0	24 0	23 0	...	...	...
45	Manbhoom	14 0	18 8	14 0	...	...	...	14 0	...	14 0	22 0	22 0	20 8	...	...	...

\* Return not received.

† In the interior the retail price of common rice ranged from 22 seers 5 chittack to 26½ seers per rupee.

‡ The retail price of salt at Cox's Bazar was 10 seers per rupee.

§ In the interior the retail price of salt ranged from 8 to 12½ seers per rupee.

|| In the Aurangabad sub-division the retail price of salt was 11 seers per rupee.

¶ In the sub-divisions the retail prices of salt per rupee were:—Buxar and Basarain 12 seers, and Bhambush 11 seers.

‡ In the sub-divisions the retail prices of salt per rupee were:—Tajpore 11½ seers and Madhubani 11 seers.

V In the interior the retail price of salt ranged from 10 to 12½ seers per rupee.

SEER OF 80 TOLANS.

SEER OF 80 TOLANS.										ANNUAL PRICES PER MAUND OF 40 HUND.		DISTRICTS.				
LASSER WILLY- MAO OR MUWA AND CHENA		MAIZE OR INDIAN- CORN		GRAN.		FIREWOOD.		SALT.		SALT.						
Present return.		Next preceding return.		Present return.		Next preceding return.		Present return.		Next preceding return.		Present return.		Next preceding return.		Corresponding return of last year.
Corresponding return of last year.		Present return.		Next preceding return.		Corresponding return of last year.		Present return.		Next preceding return.		Corresponding return of last year.		Present return.		Next preceding return.

#### *Eastern Districts.—Concluded*

S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	Rs. A.	Rs. A.	Rs. A.	
...	...	...	...	...	...	14 0	13 0	13 0	130 0	120 0	40 0	13 0	13 0	11 0	2 14	2 14	3 4		Chittagong.	
...	...	...	...	...	...	8 0	11 0	12 0	...	...	...	10 0	10 0	10 0	3 6	3 6	3 0		Noakholly.	
...	...	...	...	...	...	15 10	16 10	16 0	...	...	...	13 4	12 0	12 0	3 8	3 8	3 4		Tipperah.	
...	...	...	...	...	...	...	...	...	...	320 0	320 0	...	8 0	8 0	...	4 8	4 8		Chittagong Hill Tracts.	
...	...	...	...	...	...	14 0	14 0	14 0	...	...	...	11 0	11 0	11 0	3 4	3 4	3 4		Hill Tipperah.	

MEMBER

...	...	...	24 0	33 0	30 0	28 4	27 0	23 4	100 0	100 0	112 0	112 0	13 0	11 0	3 0	3 0	3 0	Patna.
...	...	...	...	...	...	21 0	22 0	21 0	900 0	200 0	0 180 0	0 11 0	11 0	11 0	3 6	3 6	3 5	Gya.
...	...	...	28 0	24 0	...	23 0	12 0	20 0	140 0	140 0	0 120 0	0 12 8	12 8	12 8	3 1	3 1	3 1	Shahabad.
28 0	27 8	22 0	30 14	28 10	23 0	24 8	20 16	29 0	220 0	176 0	0 160 0	0 12 15	12 15	13 6	3-0-6	3-0-6	3-1-6	Darbhanga.
...	...	...	30 0	29 0	23 0	20 0	20 0	21 0	140 0	140 0	0 140 0	0 12 0	12 0	13 0	3 4	3 4	3 4	Muzaffarpore.
23 0	20 0	23 0	33 0	29 8	22 8	22 8	22 0	20 0	100 0	100 0	0 100 0	0 13 0	12 4	11 0	3-2-0	3-2-0	3-4-0	Baran.
...	...	...	32 0	32 0	8 0	18 0	17 0	23 0	...	...	...	13 0	12 0	11 12	3 4	3 4	3 5	Chumprau.
...	...	...	35 12	33 8	23 1	24 2	25 2	21 0	196 0	126 0	0 126 0	0 13 2	13 1	12 1	2-13-3	2-13-0	3-2-5	Monghyr.
...	...	...	32 12	31 0	21 7	24 0	22 11	30 13	151 8	104 0	0 151 8	0 12 10	12 10	15 10	3 0	2-14-0	3 0	Bhagnipore.
...	...	...	...	...	...	17 0	17 0	15 0	180 0	160 0	0 160 0	0 10 0	...	11 0	3 10	...	...	Farneah.
...	...	...	...	...	...	19 0	16 0	13 0	180 0	160 0	0 160 0	0 12 0	12 0	11 0	3 4	3 4	3 4	Maldah.
...	...	...	30 0	28 0	23 8	17 8	17 0	15 8	200 0	200 0	0 200 0	0 11 8	11 8	11 8	3-5-6	2-5-0	3-4-6	Sonthal Pergna.

ORISSA.

17	1	16	12	15	13	...	...	...	21	0	23	10	15	12	80	0	80	0	80	0	14	0	14	0	14	0	3	12	3	12	3	12	Cuttack.
									19	11	17	1	18	6	100	0	100	0	100	0	18	0	14	7	18	3	3	7	2	6	3	12	Pooree.
																				Z3													
									15	0	15	0	13	0	130	0	120	0	160	0	10	12	10	12	10	0	3	0	3	0	3	14	Balaore.

CHOTA NAGPORE,  
South-Western Frontier Agency.

25	0	27	0	24	0	24	0	8	0	17	8	17	8	18	0	240	0	240	0	240	0	11	0	10	0	11	0	3-4-9	3-7-3	3	8	Haarlembarh.		
40	0	40	0	32	0	18	0	20	0	24	0	15	0	18	0	14	0	120	0	120	0	100	0	11	0	11	0	10	0	3	6	3	10	Lehardigga.
...	...	...	...	...	...	...	...	...	...	12	0	15	0	20	0	160	0	160	0	160	0	9	0	9	0	8	0	3	0	4	0	4	0	Singbloom.
...	...	...	...	...	...	...	...	...	...	17	0	17	0	15	0	240	0	240	0	120	0	10	0	10	0	10	0	3	9	3	4	3	8	Manbloom.

X The retail price of salt in the interior ranged from 10 to 13 annas per ruppee.

X The retail price of salt in the interior ranged from 10 to 13 annas per rupee.  
Y In the subdivisions the retail prices of salt per rupee were:—Banka and Roopur 11 annas, and Madhupura 12 annas.

Y In the subdivisions the retail prices of salt per rupee were:—Banka and Begunah 11 seers, and Bhandup  
Z In the subdivisions the retail prices of salt per rupee were:—Begunah 11 seers, and Jampur 11½ seers.

Z) In the sub-divisions of Kishouranga and Armoah the total price of salt was 10 rupees per rupan.

29 In the sub-division of Raunehal the retail price of salt was 12½ seers per rupee.

28 The retail price of salt at Bhadrachal was 8 annas per rupee.

Published for general information.

COLMAN MACAULAY,

**Secretary to the Govt. of Bengal**



*WHOLESALE PRICES-CURRENT of Food-grains, Firewood, and Salt in*

Number	MARTS.	PRICES PER MAUND														
		WHEAT.			BARLEY.			RICE, BEST SORT.			RICE, COMMON.			BULWER MILLER— GUMBOO BAJRA.		
		Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.
		R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.
1	Calcutta	2 6 0	2 4 0	2 0 0	2 0 0	2 0 0	2 2 0	4 12 0	5 0 0	6 8 0	3 12 0	2 12 0	3 0 0	2 0 0	2 8 0	1 16 0
2	Berajunge	2 7 0	2 8 0	2 7 0	...	...	...	4 12 0	4 12 0	4 0 0	2 12 0	3 2 0	3 4 0	...	...	...
3	Dacca	2 12 0	2 4 0	2 12 0	1 12 0	2 8 0	2 10 0	2 10 0	3 10 0	3 5 0	2 8 0	2 12 0	2 14 0	...	...	...
4	Nardingunge	...	...	...	...	...	...	2 11 0	2 12 0	2 9 0	2 6 0	2 10 0	2 7 0	...	...	...
5	Chittagong	2 8 0	2 8 0	2 8 0	...	...	...	2 12 0	3 0 0	2 12 0	2 2 0	2 6 0	2 0 0	...	...	...
6	Patna	1 11 0	1 9 0	2 0 0	1 8 0	1 8 0	1 6 0	3 5 0	3 5 0	3 1 0	1 12 0	2 2 0	2 14 0	...	...	...
7	Bahore	2 8 0	2 8 0	2 8 0	2 2 0	2 2 0	...	3 0 0	3 0 0	2 4 0	1 12 0	1 10 0	1 10 0	...	...	...
8	Pooree	...	...	...	...	...	...	...	...	...	3 4 0	2 0 0	2 0 0	...	...	...
9	Cuttack	1 11 0	1 11 0	2 0 0	...	...	...	3 0 0	3 0 0	2 0 0	2 0 0	2 0 0	2 0 0	...	...	...

CALCUTTA,  
The 23rd December 1884.

*the undermentioned Marts of Bengal for the Fortnight ending the 15th December 1884.*

OF 40 BERRS.

GRASS MILLET— CHOLU JOWAR			LEWER MILLET— KAGLOR MURWA AND CHENNA.			MAIZE OR INDIAN- CORN.			GRAM.			FIREWOOD.			SALT.			MARTS.
Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	
K. A. P.	K. A. P.	R. A. P.	K. A. P.	K. A. P.	R. A. P.	K. A. P.	K. A. P.	R. A. P.	K. A. P.	K. A. P.	R. A. P.	K. A. P.	K. A. P.	R. A. P.	K. A. P.	K. A. P.	R. A. P.	
8 9 03	9 0 1	15 0	...	...	...	1 10 01	12 01	12 03	2 10 03	2 10 03	2 10 03	0 6 90	5 90	6 0 00	3 0 00	12 03	12 03	Calcutta.
...	...	...	...	...	...	...	...	...	2 10 03	2 10 03	2 10 03	...	...	...	3 0 03	0 03	0 0	Serajungo.
...	...	...	...	...	...	...	...	...	2 5 6	2 4 02	4 0	0 6 30	7 00	7 0	3 0 03	0 03	2 0	Dacca.
...	...	...	...	...	...	...	...	...	2 7 0	2 4 02	4 0	2 8 00	8 00	7 0	3 14 02	14 03	0 0	Nazimungo.
...	...	...	...	...	...	...	...	...	2 12 0	3 0 02	14 0	0 4 00	4 00	5 3	2 14 02	14 03	4 0	Chittazong.
...	...	...	...	...	...	1 8 01	2 01	4 01	1 6 01	1 6 01	9 0	0 6 00	5 00	5 0	3 0 03	0 03	0 0	Patna.
...	...	...	...	...	...	...	...	...	2 8 0	2 8 03	0 0	0 6 00	5 00	3 0	3 6 03	6 03	14 0	Bahar.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2 7 03	8 02	12 0	Poona.
...	...	...	2 2 0	2 5 0	2 5 0	...	...	...	1 11 0	1 9 02	5 0	0 8 00	8 00	3 0	2 12 02	12 03	12 0	Cuttack.

Published for general information.

COLMAN MACAULAY,  
Secy. to the Govt. of Bengal.

The following Statement shows the Quantities of the Principal Staples of Traffic imported into Calcutta from the Interior during the month of September 1884.

## IMPORTS INTO CALCUTTA.

Where imported	FOOD-GRAINS.							FIBROUS PRODUCTS.		OIL-SEEDS.		Tea.	Cotton.	Silk.	SUGAR.		TOBACCO.	
	RICE AND PADDY.			Wheat.	Gram and pulses.	Other food-stuffs.	Total.	Jute, raw.	Gunny-bags.	Linseed.	Mustard-seed.				Drained.	Un-drained.	Be-path.	Other kinds.
	Rice.	Paddy.	Total (in rice).															
BURMA.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	No.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.
Burawao	544	400	857		2,383		3,250		100	118		390	4	54	28			11
Beerbhoom	40				371		411		270	25		499	8	808				62
Midnapore	1,31,415	78,323	1,78,817	5,944	18,390	178	1,77,143		353,800	32,533	4,185	1,094	71	3,598	11,194			6,441
Howly	37,543	1,845	39,388	16			39,404		45,077	194,346	222	1,132		8,651	10,024			4,771
St. Perinunahs	1,23,677	11,431	1,35,108				1,35,108		1,55,602	28,280	7,986	3,780		215	215			3,771
Nudda	1,690		1,690	30,844	60,041	6,837	91,772		310					406				340
Kutia	7,186	12,785	19,971		20,282	832	40,085		1									
Jessore	12,656	2,730	15,386		16,240	408	16,648		18,003									
Mohoradabad																		
Dumra	11,441		11,441		16,391		27,832		23,218	129,083	2,090	2,090		473	229			61
Kajshabye	2,380		2,380				2,380		82,134	4	3,155							127
Bangalore									1,18,024	2,384								1,418
Betta	3,608		3,608		31,800		35,408		18,201	13,029								1,418
Panna									2,41,090	39,147								1,418
Darjeeling									8,837	3,034								1,418
Jungpore																		1,418
Dacca	6,720		6,720	2,123	16,310		23,033		1,83,333		4,251							10,110
Furzedpore	7,073	800	7,873		12,708	1,637	22,218		7,52,012		8,181							307
Barkerpore	1,57,838	204	1,58,042		481		1,58,523		2,801		875							
Mynting	3,370		3,370		3,404		6,774		1,827		2,326							
Tipperah	10,200		10,200				10,200											
Chittagong																		
Noakhali	65,344		65,344				65,344		100									
Total of Bengal	6,08,505	1,43,614	7,52,119	50,132	1,00,910	11,852	9,43,033	16,18,291	725,253	51,634	64,513	24,702	3,583	1,874	13,237	39,651	3,785	34,902
BHAR.																		
Patna	700		700	25,430	20,516	4,025	50,971			1,78,241	25,038			11	1,213	812		3,140
Gya				14,016	4,809	2,627	21,452			1,250	387							7
Simlabad				2,120	350	526	3,096			16,800	3,120							9
Moulampur				333	400	60	793			3,801	6,801							26
Barh				6,910	6,742	3,800	17,452			43,110	6,801							1,631
Barh										7,047	6,801							
Chunar										6,411	250							
Chunar										34,027	12,274							
Monghyr	1,914		1,914	6,802	18,300	973	27,087			13,166	8,169			475				35
Shahjehanpore				14,724	3,604	6,001	24,329			2,502	5,000			20				30
Farrukhabad				13,440	3,918	4,050	21,408			4,747	8,350			35				3,008
Meerut																		
Meerut				2,323	408	544	3,275			7,417	8,040			20				
Total of Bihar	3,135		3,135	91,701	60,187	23,183	1,77,071	5,307	1,340	3,94,975	87,497	262	630	832	3,305	7,064	51	7,308
ORISSA.																		
Cuttack																		
Bansore	50,310	23,742	74,052		634		74,686		173									
Total of Orissa	50,310	23,742	74,052		634		74,686	467	680									
CEYLON NAPORE.																		
Harribagh																		
Grand Total of supplies from the Provinces under the Lieutenant-Governor of Bengal.	7,22,314	1,67,356	8,89,670	1,21,832	2,30,611	31,017	11,80,291	16,24,030	727,953	2,50,633	1,82,314	25,591	4,315	2,334	16,609	41,918	2,787	40,575
OTHER PROVINCES.																		
Assam										9,031	24,316	86,364	103	20				
North-Western Provinces and Oudh	2		2	62,819	34,128	1,040	98,088			80,129	81,823	38	3,302	252	130			260
Punjab	1		1	6,670	1,477		8,147			1,133	278		751		2			
Central Provinces				407	810		1,217			3,709			1,784					
Southey																		
Madras					24,368		24,368											
British Burmah									1,000									
Other places	120		120		48		168		300									
Grand Total (1884)	7,22,314	1,67,356	8,89,670	1,21,832	2,30,611	31,017	11,80,291	16,24,030	727,953	2,50,633	1,82,314	25,591	4,315	2,334	16,609	41,918	2,787	40,575
of imports in Sept. 1884	11,45,351	1,73,657	12,19,008	12,77,048	2,34,914	27,627	22,76,607	12,04,788	2,144,080	9,42,630	1,40,423	1,10,033	29,283	2,716	80,338	60,863		

\* One maut of paddy is equivalent to 25 seers of rice.  
† Exclusive of bags obtained by local manufacturers.

The Sea-borne Trade of Calcutta in these Staples during the month of September 1884 was as follows.—

Imported from Calcutta—																	
To Indian ports—																	
Bombay	60,654		60,654		80		60,734	2,905	463,780								
Madras	71		71	449	8,020	111	8,641	5,097	477,038	367							
Other ports in India	14,200		14,200	100	1,974		16,174	2,707		1	71						
British Burmah	2,473		2,473	51	4,250	20	6,754	381	234,900								
Other Indian ports					800		800		188,000								
Pondicherry				82	60		142										
Total of Inter-provincial trade	87,398		87,398	671	15,300	137	1,03,413	8,034	1,344,283	369	71	643	11	630	1,774	123	17,836
To Foreign ports—																	
United Kingdom	29,199		29,199	1,90,142	1,05,850		3,15,191	7,27,809	607,100	4,14,917	1,40,997	1,10,041	1,047	915			8,700
Other Foreign ports	3,43,000	2,723	3,45,723	33,930	18,242	11,703	3,99,800	1,22,831	7,485,519	90,708		1,123	246	602			1,320
Total of Foreign trade	3,72,199	2,723	3,74,922	2,14,102	1,24,092	11,703	7,24,991	8,50,640	8,092,619	5,10,625	1,43,067	1,11,164	1,093	1,277			10,020
Grand Total (1884)	4,30,279	2,723	4,33,002	2,14,102	1,24,092	11,703	7,24,991	8,50,640	8,092,619	5,10,625	1,43,067	1,11,164	1,093	1,277	1,774	123	27,856
of exports in Sept. 1884	9,84,302	1,471	9,85,773	23,43,876	82,093	11,800	24,08,165	4,62,004	7,424,345	5,40,379	1,10,074	1,10,033	4,379	2,503	1,978	118	

The following Statement shows the several Routes followed by the Trade in the Principal Staples of Traffic imported into Calcutta during the month of September 1884.

## IMPORTS INTO CALCUTTA.

SPECIFICATION OF ROUTES.	FOOD-GRAINS.					FIBROUS PRODUCTS.		OILSEEDS.		Tea.	Cotton.	Silk.	SUGAR.		TOBACCO.	
	Rice.	Paddy.	Wheat.	Gram and pulses.	Other food-grains.	Jute, raw.	Gunny-bags.	Linseed.	Mustard-seed.				Drain- ed.	Un- drained.	Blat- path.	Other kinds.
By country boats	Mds. 0,14,180	Mds. 97,579	Mds. 1,15,040	Mds. 1,84,193	Mds. 20,350	Mds. 3,70,353	No. 662,003	Mds. 1,93,394	Mds. 1,45,013	Mds. 77,053	Mds. 3,004	Mds. 433	Mds. 7,720	Mds. 91,720	Mds. 1,289	Mds. 17,137
river steamers	104	7,932	64,304	5,837	1,79,893	2,31,407	1,703	2,31,407	81,393	1,313	4,230	1,330	3,057	2,141	1,508	2,380
by rail	3,933	16,005	11,301	10,31,290	19,933	1,703	2,31,407	81,393	1,313	4,230	1,330	3,057	2,141	1,508	2,380	2,380
Cal. and South- Eastern	6,788	6,368	16	104	37,708	45,130	2,130	2	2	2	2	2	2	2	2	2
road	44,803	24,016	35,640	27,607	12,90,788	3,143,460	8,42,038	1,40,433	1,10,023	29,232	2,718	30,338	58,883	2,757	67,333	605
sea	48,050	24,016	35,640	27,607	12,90,788	3,143,460	8,42,038	1,40,433	1,10,023	29,232	2,718	30,338	58,883	2,757	67,333	605
Grand Total of Imports in September...	1884... 7,32,437	1,23,756	1,00,871	2,61,093	35,407	10,24,417	739,253	4,38,554	3,12,036	1,11,191	10,643	2,861	10,831	48,104	2,757	67,333
1883...	11,58,831	1,21,547	12,77,948	3,36,014	27,607	12,90,788	3,143,460	8,42,038	1,40,433	1,10,023	29,232	2,718	30,338	58,883	2,757	67,333

The following Statement shows the Values, Quantities, and Numbers of the Principal Staples of Traffic exported Inland from Calcutta during the month of September 1884.

## EXPORTS FROM CALCUTTA.

Whither exported.	Cotton piece-goods.		Cotton twist.		Salt.	Gunny-bags.	Whither exported.	Cotton piece-goods.		Cotton twist.		Salt.	Gunny-bags.
	European.	Indian.	European.	Indian.				European.	Indian.				
<b>BENGAL.</b>													
	Rs.	Rs.	Mds.	Mds.	Mds.	No.		Rs.	Rs.	Mds.	Mds.	Mds.	No.
Burdwan	5,24,671	110	483	1,243	40,018	8,143	CHOTA NAGPORE.						
Berhampur	3,12,912	350	80	277	10,773	7,176	Hazarihagh	67,309					
Manikpur	1,14,808		707		63,800	4,203	Manbhour	1,94,243		34	101	10,189	1,507
Hugli	1,28,123	11,407	231	78		38,440	Total of Chota Nagpore	2,60,552		83	1,645	7,305	872
24-Burghunahs	1,21,854	27,891	203		14,003	6,830	Grand Total of supplies into the provinces under the Lieutenant-Governor of Bengal.	71,48,800	50,108	9,533	7,071	7,65,789	1,380
Nudera	6,70,544		793		29,280	19,702							583,080
Khulna	49,020		20		2,403		<b>OTHER PROVINCES.</b>						
Jessore	11,300		128		29,851	840	Assam	4,47,192		1,426		36,187	
Moorshedabad	2,71,600	18,000	2	23	13,510	19,535	North-Western Provinces						
Banskhora	35,327		85		9,025		and Oude	24,75,410	17,180	2,870	1,933	10,703	417,573
Kanchanpore	1,52,756		233		31,793	420	Punjab	12,61,825	59,350	1,820	74		189,713
Kanchanpore	3,06,000		233		15,080	210	Central Provinces	38,034		594	17		12,406
Kolkata	35,888	230	31		5,208		Rajputana States	17,230		122			103
Bogra	1,45,344		180		71,020	9,053	Bombay	3,832	110				463,700
Darjeeling	38,344	440	104		741	2,800	Madras	94,700	403	2,344	15		472,433
Durgam	1,51,410		190		10,100	70	British Burmah	1,97,431		721	2,800		334,000
Dacca	6,32,500	320	1,271	778	47,031	1,453	Other places	17,005	1,740				5,025,703
Baranpore	4,07,054		430		21,513	1,470							
Chittagong	67,373				31,516		Grand Total of 1884	1,14,03,000	1,35,025	19,800	11,000	8,11,470	10,330,000
Chittagong	26,800	3,050	103		15,225		Exports in Sept. 1884	1,37,03,000	1,10,300	20,350	10,000	5,03,410	6,93,000
Noakhali	1,400		52		2,273								
Noakhali					950	10,800							
Noakhali					6,075								
Total of Bengal...	61,70,034	55,728	4,203	2,308	4,08,938	126,616							
<b>BEHAR.</b>													
	Rs.	Rs.	Mds.	Mds.	Mds.	No.		Rs.	Rs.	Mds.	Mds.	Mds.	No.
Patna	5,30,408	840	108	374	31,250	153,470	IMPORTED INTO CALCUTTA.						
Gya	1,70,770		20	140	17,079	420	From Foreign Ports—						
Shahabad	1,70,306	860	1	410	22,407	19,399	United Kingdom	51,18,283		10,464		5,70,394	
Monrotpore	37,084		18		8,008	2,243	Other Foreign ports	32,308		241		17,370	
Dumra	2,20,320		7	403	62,407	29,475	Total of Foreign Trade	64,5,380		10,813		6,77,103	
Satna					5,000	450	From Indian Ports—						
Chunpura	6,02,302		17		10,100	20,081	Bombay	3,10,313	7,410		4,800	33,283	
Marhary	1,81,100	440	23	100	17,809	17,013	Madras	9,370					
Bharnipore	2,01,408	560	69	100	15,211	450	Other ports in Madras						
Bharnipore	1,10,004	110	90	400	4,823	3,230	British Burmah	2,100	100	16		1,000	
Barh	4,30,600		72	400	2,222	21,400	Other Indian ports	25		2		1,130	
Total of Behar...	26,10,632	2,600	494	2,683	2,68,334	275,030	Total of Interport Trade	3,58,003	7,410	17	4,800	33,283	2,130
<b>ORISSA.</b>													
	Rs.	Rs.	Mds.	Mds.	Mds.	No.		Rs.	Rs.	Mds.	Mds.	Mds.	No.
Cuttack	7,400	350	2,753	131		20,500	Grand Total of 1884	64,08,000	7,410	10,813	4,800	7,12,303	2,130
Balsora	5,003		13			137,000	Imports in Sept. 1884	60,90,000	4,30,000	9,542	9,642	7,00,000	2,130
Total of Orissa...	12,400	350	2,801	131		153,100							

The following Statement shows the several Routes followed by the Trade in the Principal Staples of Traffic exported from Calcutta during the month of September 1884.

SPECIFICATION OF ROUTES.	COTTON PIECE-GOODS.		COTTON TWIST.		Salt.	Gunny-bags.
	European.	Indian.	European.	Indian.		
country boats	Rs. 3,10,430	Rs. 27,090	Mds. 1,949	Mds. 1,949	Mds. 4,17,393	No. 109,081
river steamers	8,06,748	...	2,511	778	10,267	...
by rail	28,49,608	22,810	6,533	8,134	2,08,004	780,080
Calcutta and South-Eastern	26,72,901	830	2,033	...	50,000	22,165
road	1,48,016	11,803	750	48	59	945
sea	4,08,786	5,010	8,523	2,080	4,039	1,000
Grand Total of Exports in September...	1884... 1,14,99,860	1,58,028	19,800	11,035	2,11,570	10,530,000
1883...	1,37,03,041	1,10,300	20,350	10,000	5,03,410	6,93,000

\* As per tariff declaration value.

## Meteorological Report of the Province of

METEOROLOGICAL DIVISION.	DISTRICT.	Representative station.	STATION OBSERVATIONS.													Average humidity at 10 A. M.	Average cloud amount at 10 A. M. for week.	
			AIR PRESSURE.			WIND.		TEMPERATURE.										
			Mean barometric height, 10 A. M.	Mean reduced to sea-level.	Variation from mean.	Prevailing direction.	Mean wind velocity.	Highest during week.	Lowest during week.	Mean maximum temperature.	Mean minimum temperature of week.	Mean daily temperature of week.	Variation from normal mean of week.	Mean 10 A. M. temperature.				
Orissa.	Pooree	Gopalpore	30.124	30.174	—	NNW	26.7	77.0	58.0	75.7	60.9	68.3	—	78.4	63	2.1		
		False Point	30.143	30.170	+0.035	NE	23	78.4	53.0	77.1	58.0	67.0	+0.3	72.5	67	2.1		
	Cuttack	Cuttack	30.000	30.174	+0.07	Calm	24	83.8	53.0	81.9	58.2	70.1	+0.1	73.3	51	1.3		
	Balasore	Balasore	30.134	30.193	—	NNH	45	79.5	61.5	76.0	53.3	68.0	—	71.1	58	0.1		
	South-West Midnapore	Saugor Island	30.165	30.182	+0.018	NNE	153	78.7	58.0	75.0	59.3	67.0	0	69.3	73	5.0		
SOUTH-WEST BENGAL.	South 24 Pargunnahs	Midnapore	30.042	30.168	—	N	57.5	79.2	52.7	78.1	63.4	65.8	—	71.0	54	1.3		
	24 Pargunnahs	Calcutta	30.153	30.177	+0.025	NNE	62	77.1	54.3	76.2	66.7	68.0	+0.8	68.3	54	0.		
	Howrah																	
	Hooghly																	
	Burdwan	Murdwan	30.067	30.121	+0.054	N	33.0	78.3	58.5	77.4	66.3	66.9	+0.3	68.3	53	1.2		
	Bankura																	
	Boorbhoom	Ranigunge	29.654	—	—	NW	65	78.8	52.1	77.6	53.3	63.3	—	68.0	53	1.7		
	West Burdwan																	
	Moorsabadabad	Berhampore	30.078	30.147	+0.069	NW	38.0	78.4	55.2	77.1	56.0	66.5	+0.9	68.0	52	0.5		
	Nuddea																	
SOUTH BENGAL.	Jessore	Jessore	30.134	30.171	+0.037	NNW	31	78.3	51.5	77.6	53.3	63.4	+0.3	70.3	53	1.2		
	Rheola																	
	Chittagong	Chittagong	30.070	30.163	+0.093	NE & calm	33	80.1	54.1	76.0	66.0	67.0	+1.1	68.3	79	2.2		
	Chittagong Hill Tracts	Dumagiri																
	Backergunge	Barisal	30.004	—	—													
	Noakholly	Noakholly	—	—	—	Calm	41.3	78.0	50.3	77.5	53.6	65.6	—	71.2	54	5		
	Farredpore	Farredpore	30.084	—	—	ESE	19	77.6	52.0	76.4	54.3	65.4	—	72.0	58	0		
	Dacca	Dacca	30.137	30.160	+0.023	Calm	14	78.6	54.1	77.0	53.3	60.0	+0.6	72.4	59	2		
	Commilla	Commilla	30.114	30.151	—	NW	12.3	80.4	52.3	79.0	53.1	66.1	—	72.4	53	0		
	Mymensingh	Mymensingh	30.084	—	—	NNE	33	80.4	47.1	77.8	51.0	64.4	—	70.3	43	3.1		
NORTH BENGAL.	Bogra and Pabna	Seraigunge	30.319	30.167	—	ESE	36.4	78.3	50.6	77.1	52.9	63.0	—	68.6	70	1.0		
		Bogra	—	—	—	NE	238.7	77.0	53.7	77.7	54.4	65.9	—	68.3	66	0.0		
	Rajshahye	Rampore Benaulah	30.076	30.162	—	N	31.4	71.6	48.7	70.2	59.5	60.4	—	70.4	53	0.0		
	Dinapore	Dinapore	30.038	30.165	—	NE	22.1	78.0	49.7	77.7	61.4	64.6	—	68.3	62	0.3		
	Rungpore	Rungpore	30.043	30.171	—	NNE	25	72.0	48.3	77.0	61.4	64.3	—	68.5	74	0		
	Jalpigore	Jalpigore	29.838	30.154	—	S	62.0	77.0	57.1	77.1	62.0	66.0	—	71.3	61	0.5		
	Cooch Behar																	
	Darjeeling Hill Districts	Darjeeling	23.090	—	—	W & Calm	22.6	49.2	32.9	43.3	54.2	41.3	—	44.0	79	2.1		
	Purneah	Purneah	30.052	30.185	+0.133	Calm	5.7	78.5	43.3	77.3	64.1	67.3	+0.1	67.0	70	1.3		
	North Bhagalpore																	
SOUTH BENGAL.	Masulipore	Durbhunga	30.029	30.205	+0.176	WNW	51	75.0	43.3	74.4	63.5	64.0	+0.3	68.3	63	0		
	Chumpara	Motihari	29.950	30.180	—	SW & NW	105.2	75.0	43.3	75.0	65.7	60.3	—	64.2	61	0.4		
	Saras	Chupra	29.980	—	—	W & calm	23.3	76.5	45.7	76.2	60.6	62.0	—	67.9	53	0.1		
		Dehra	30.053	30.213	—	S, NW	111.0	47.47	40.0	65.17	65.3	60.29	—	65.4	63	0.2		
	Bhabhab	Ruzar	30.044	30.198	—	WNW	61.8	78.4	43.4	74.3	60.0	62.4	—	69.1	53	0.3		
		Arrah	30.074	30.183	—	NNW	8.0	75.3	43.0	73.7	60.4	61.8	—	65.3	61	0		
	Gya	Gya	30.093	30.180	—	Calm	15.0	78.3	44.7	76.6	60.0	62.8	+0.4	69.3	59	1.4		
	Patna	Bankipore	30.038	30.233	+0.195	W	33.3	74.7	45.3	73.0	63.0	63.3	+1.6	65.0	63	0.3		
	South Bhagalpore	Bhagalpore	30.014	30.184	—	W	23	76.4	43.0	75.0	61.1	62.1	—	63.6	63	0		
	South Pargunnahs	Doomka	29.903	—	—	NNW	77.7	77.2	46.4	75.0	62.1	63.3	—	67.3	74	0		
CHOTA NAGPORE.	Bazaribagh	Bazaribagh	29.103	30.190	+0.087	N, SE & E	60.4	72.2	40.3	71.3	62.1	61.7	+1.3	63.6	62	1.3		
	Lehardunga																	
	Manbhoom	Manbhoom	27.003	30.165	—	—	—	72.3	45.9	70.3	50.3	60.4	—	64.7	60	1.0		
	Singbhoon	Chyabham	29.573	—	—	N	162.4	—	50.3	—	50.8	—	—	63.1	55	0.3		

\* Mean for two days.

Explanation.—Summary.—The normal means of air pressure and temperature are the arithmetical averages or means of the readings during the year. The humidity of the atmosphere is expressed as a percentage, saturated air being represented by 100. A clear sky is denoted by 0 and an overcast sky by 100. The normal means of the numerical means or averages of the rainfall in that district determined from the returns sent in by the sub-divisions from the district (i.e., the total rainfall at the sub-divisional stations in the district sending in returns divided by the number of stations. A rain



for the week ending Friday, the 19th of December 1884.

Serial of week at observing stations.	DISTRICT OBSERVATIONS.										Representative station.	DISTRICT.	METEOROLOGICAL DIVISION.
	RAINFALL.												
	Of week.		Since 1st of month.			Since 1st of May.			Average number of rainy days.	Normal number of rainy days.			
	Mean for district.	Normal mean.	Mean for district.	Normal mean.	Variation.	Mean for district.	Normal mean.	Variation.					
NU	—	—	—	—	—	—	—	—	—	—	Gopalpore	Hooree	ORISSA.
NU	NU	0'01	NU	0'58	-0'58	49'40	57'53	-8'10	0'0	0'1	False Point	...	
NU	NU	NU	NU	0'44	-0'44	47'05	57'53	-10'01	0'0	0'0	Cuttack	Cuttack	
NU	NU	NU	NU	0'23	-0'23	50'08	53'57	+3'51	0'0	0'0	Balasore	Balasore	
NU	NU	0'03	NU	0'33	-0'33	50'30	51'53	+1'23	0'0	0'1	Saugor Island	South-West Midnapore	SOUTH-WEST BENGAL.
NU	NU	NU	NU	0'20	-0'20	43'01	50'01	-7'00	0'0	0'0	Midnapore	Midnapore	
NU	NU	NU	NU	0'27	-0'27	40'03	51'03	-11'00	0'0	0'0	Calcutta	Howrah	
NU	NU	NU	NU	0'15	-0'15	33'03	45'33	-12'30	0'0	0'0	Bardwan	Bardwan	
NU	NU	NU	NU	0'19	-0'19	35'34	51'18	-15'44	0'0	0'0	Ranigunge	Bankura	SOUTH-WEST BENGAL.
NU	NU	NU	NU	0'16	-0'16	35'42	49'74	-14'32	0'0	0'0	Baranpore	Baranpore	
NU	NU	NU	NU	0'14	-0'14	30'42	49'40	-18'58	0'0	0'0	...	Naldia	
NU	NU	NU	NU	0'26	-0'26	53'11	53'18	-0'07	0'0	0'0	Jessore	Jessore	
NU	NU	0'03	NU	0'58	-0'58	106'04	112'28	-6'24	0'0	0'2	Chittagong	Chittagong	SOUTH-WEST BENGAL.
NU	NU	NU	NU	0'44	-0'44	82'56	89'07	-6'11	0'0	0'0	Dumagiri	Chittagong Hill Tracts	
NU	NU	0'02	NU	0'51	-0'51	85'11	76'74	+8'35	0'0	0'1	Barrick	Bachergunge	
NU	NU	0'03	NU	1'01	-1'01	95'41	110'06	-14'25	0'0	0'1	Naakholly	Naakholly	
NU	NU	0'01	NU	0'13	-0'13	43'88	56'03	-12'15	0'0	0'1	Ferozdpore	Ferozdpore	SOUTH-WEST BENGAL.
NU	NU	0'02	NU	0'22	-0'22	47'81	58'86	-11'05	0'0	0'1	Dacca	Dacca	
NU	NU	NU	NU	0'39	-0'39	64'15	71'50	-7'35	0'0	0'0	Comilla	Comilla	
NU	NU	0'03	NU	0'17	-0'17	40'04	58'07	-18'03	0'0	0'1	Mymensingh	Mymensingh	
NU	0'04	0'01	0'04	0'16	-0'16	37'77	53'37	-15'60	0'2	0'1	Sonajunga	Bogra and Pabna	SOUTH-WEST BENGAL.
NU	NU	NU	NU	0'13	-0'13	34'03	53'34	-19'31	0'0	0'0	Bogra	Bogra	
NU	0'01	NU	0'01	0'16	-0'16	38'75	50'36	-11'61	0'2	0'0	Ranpore Bazar	Rajshahi	
NU	NU	0'02	NU	0'13	-0'13	40'70	75'53	-35'23	0'0	0'1	Dinapore	Dinapore	
NU	NU	0'06	NU	0'20	-0'20	55'23	114'04	-58'81	0'0	0'2	Bulga	Bulga	SOUTH-WEST BENGAL.
0'13	NU	0'13	NU	0'22	-0'22	113'51	158'79	-45'28	0'0	0'3	Darjeeling	Darjeeling Hill District	
NU	NU	NU	NU	0'06	-0'06	40'13	57'03	-16'50	0'0	0'0	Purneah	Purneah	
NU	NU	NU	NU	0'04	-0'04	31'09	43'15	-12'06	0'0	0'0	Moulvibazar	Moulvibazar	
NU	NU	NU	NU	0'03	-0'03	41'79	43'03	-1'24	0'0	0'0	Darbhanga	Darbhanga	SOUTH-WEST BENGAL.
NU	NU	NU	NU	0'01	-0'01	30'32	44'75	-14'43	0'0	0'0	Motihari	Chhapra	
NU	NU	NU	NU	0'01	-0'01	25'10	30'37	-5'27	0'0	0'0	Chupra	Saran	
NU	NU	NU	NU	0'01	-0'01	25'10	30'37	-5'27	0'0	0'0	Lahore	Shahabad	
NU	NU	NU	NU	NU	NU	27'74	30'37	-2'63	0'0	0'0	Arrah	...	SOUTH-WEST BENGAL.
NU	NU	NU	NU	0'01	-0'01	25'00	40'34	-15'34	0'0	0'0	Gya	Gya	
NU	NU	NU	NU	0'03	-0'03	31'03	41'30	-10'27	0'0	0'0	Bankura	Bankura	
NU	NU	NU	NU	0'03	-0'03	31'03	41'30	-10'27	0'0	0'0	Shahadpur	Shahadpur	
NU	NU	NU	NU	0'05	-0'05	33'44	45'57	-12'13	0'0	0'0	Dumka	Dumka	SOUTH-WEST BENGAL.
NU	NU	NU	NU	0'07	-0'07	34'10	40'40	-6'30	0'0	0'0	Hazaribagh	Hazaribagh	
NU	NU	NU	NU	0'11	-0'11	36'56	47'40	-10'44	0'0	0'0	Manikpur	Manikpur	
NU	NU	0'03	NU	0'20	-0'20	44'07	51'52	-7'45	0'0	0'1	Chyngoma	Chyngoma	

period for the past ten years. The variations are negative when the mean for the week is less than the corresponding normal mean, and positive when greater. The number denoting cloud amount represents the part of the sky covered, the whole sky being denoted by 10. Under the head "district observations" are the numerical averages of the rainfall returns recorded at stations for the period in question during the past 12 years. The means for the "district" are the numerical averages of the rainfall returns recorded at stations on which at least an hundredth of an inch fell.

## Statement of Rainfall in Bengal for the week ending Friday (6 p.m.), the 19th December 1884.

Meteorological division.	District.	Station.	RAINFALL.							TOTAL.		Total rain- fall from 1st to 19th December 1884.	Average total rain- fall from 1st to 19th December.	Total rain- fall since 10th May 1884.	Average rainfall from 10th May to date.
			Saturday, 13th December.	Sunday, 14th December.	Monday, 15th December.	Tuesday, 16th December.	Wednesday, 17th December.	Thursday, 18th December.	Friday, 19th December.	Number rainy days.	of Rainfall week.				
Calcutta	Hooghly	Poorce	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00
		Khordah	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00
		Banpur	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00
		False Point	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00
		Hookitola	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00
	Outback	Jagatsingapore	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00
		Hanki	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00
		Outback	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00
		Kendrapara	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00
		Jajpore	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00
Balasore	Chandball	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	
	Bhuddrak	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	
	Sorah	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	
	Palasore	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	
	Jenaisore	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	
South-West Bengal.	Midnapore	Contal	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00
		Saugor Island	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00
		Tumloor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00
		Midnapore	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00
		Chattal	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00
	24-Pargunnas	Diamond Har- bour.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00
		Alipore Jail	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00
		Harrackpore	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00
		Dum-Dum	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00
		Barnet	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00
Hoerab	Howrah	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	
	Howrah	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	
	Howrah	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	
	Howrah	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	
	Howrah	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	
Hooghly	Serampore	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	
	Hooghly	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	
	Hooghly	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	
	Hooghly	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	
	Hooghly	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	
Burdwan	Culina	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	
	Burdwan	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	
	Culina	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	
	Burdwan	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	
	Burdwan	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	
Bankura	Bankura	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	
	Bankura	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	
	Bankura	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	
	Bankura	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	
	Bankura	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	
Sagarbhoom	Bh. Sagar	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	
	Sagarbhoom	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	
	Sagarbhoom	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	
	Sagarbhoom	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	
	Sagarbhoom	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	
Nedra	Songor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	
	Songor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	
	Songor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	
	Songor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	
	Songor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	
Khowda	Khowda	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	
	Khowda	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	
	Khowda	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	
	Khowda	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	
	Khowda	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	
Jessore	Jessore	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	
	Jessore	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	
	Jessore	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	
	Jessore	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	
	Jessore	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	
Mooreabad	Kandi	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	
	Mooreabad	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	
	Mooreabad	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	
	Mooreabad	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	
	Mooreabad	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	
Cox's Bazar	Cox's Bazar	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	
	Cox's Bazar	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	
	Cox's Bazar	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	
	Cox's Bazar	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	
	Cox's Bazar	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	
Chittagong	Chittagong	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	
	Chittagong	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	
	Chittagong	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	
	Chittagong	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	
	Chittagong	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	
Backergunge	Backergunge	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	
	Backergunge	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	
	Backergunge	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	
	Backergunge	0.00	0.00	0.00	0.00										

## Statement of Rainfall in Bengal for the week ending Friday (6 p.m.), the 19th December 1884—concluded.

Meteorological division.	District.	Station.	RAINFALL.							TOTAL.		Total rainfall from 1st to 19th December 1884.	Average total rainfall since 1st to 19th December.	Total rainfall since 1st May 1884.	Average rainfall from 1st May to date.
			Saturday, 13th December.	Sunday, 14th December.	Monday, 15th December.	Tuesday, 16th December.	Wednesday, 17th December.	Thursday, 18th December.	Friday, 19th December.	Number of rainy days.	Amount of rain in inches.				
NORTH BENGAL	Pabna	Pabna	...	...	...	...	...	...	...	NI	NI	NI	0.10	45.31	54.08
		Sherpore	...	...	...	...	...	...	...	NI	NI	NI	0.10	40.13	52.49
	Bogra	Newkilla	...	...	...	...	...	...	...	NI	NI	NI	0.25	57.25	61.47
		Bogra	...	...	...	...	...	...	...	NI	NI	NI	0.10	38.10	55.32
	Rajshahi	Benaulah	...	...	...	...	...	...	...	NI	NI	NI	0.09	37.09	61.23
		Natore	...	...	...	...	...	...	...	NI	NI	NI	0.23	40.23	53.46
	Maldah	Natore	...	...	...	...	...	...	...	NI	NI	NI	0.11	33.11	59.08
		Natore	...	...	...	...	...	...	...	NI	NI	NI	0.13	34.13	65.54
	Dinapore	Maldah	...	...	...	...	...	...	...	NI	NI	NI	?	43.88	?
		Dinapore	...	...	...	...	...	...	...	NI	NI	NI	0.17	38.17	50.51
	Kumargura	Churni	...	...	...	...	...	...	...	NI	NI	NI	0.28	38.28	58.09
		Kumargura	...	...	...	...	...	...	...	NI	NI	NI	0.21	41.21	40.82
	Jalpaiguri	Dinapore	...	...	...	...	...	...	...	NI	NI	NI	0.17	42.17	34.52
		Jalpaiguri	...	...	...	...	...	...	...	NI	NI	NI	0.07	34.07	53.00
	Cooch Behar	Churni	...	...	...	...	...	...	...	NI	NI	NI	?	37.72	?
		Cooch Behar	...	...	...	...	...	...	...	NI	NI	NI	0.15	45.15	63.86
	Darjeeling Hill	Kumargura	...	...	...	...	...	...	...	NI	NI	NI	0.07	38.07	74.38
		Darjeeling Hill	...	...	...	...	...	...	...	NI	NI	NI	0.08	40.08	74.88
	Darjeeling Hill	Jalpaiguri	...	...	...	...	...	...	...	NI	NI	NI	0.20	42.20	50.40
		Darjeeling Hill	...	...	...	...	...	...	...	NI	NI	NI	0.07	102.07	130.03
	North Bengal	Darjeeling Hill	...	...	...	...	...	...	...	NI	NI	NI	0.38	84.38	109.18
		Darjeeling Hill	...	...	...	...	...	...	...	NI	NI	NI	0.10	110.10	118.00
	North Bengal	Darjeeling Hill	...	...	...	...	...	...	...	NI	NI	NI	0.28	84.76	110.08
		Darjeeling Hill	...	...	...	...	...	...	...	NI	NI	NI	0.29	85.29	120.01
	North Bengal	Darjeeling Hill	...	...	...	...	...	...	...	NI	NI	NI	0.28	131.00	180.40
		Darjeeling Hill	...	...	...	...	...	...	...	NI	NI	NI	0.16	85.16	103.11
	North Bengal	Darjeeling Hill	...	...	...	...	...	...	...	NI	NI	NI	?	85.15	?
		Darjeeling Hill	...	...	...	...	...	...	...	NI	NI	NI	0.18	85.18	?
NORTH BENGAL	Purnea	Kumargura	...	...	...	...	...	...	...	NI	NI	NI	0.07	63.75	87.00
		Purnea	...	...	...	...	...	...	...	NI	NI	NI	0.06	61.06	82.75
	North Bengal	Purnea	...	...	...	...	...	...	...	NI	NI	NI	0.14	40.14	60.72
		Purnea	...	...	...	...	...	...	...	NI	NI	NI	0.01	37.01	40.35
	Durbhanga	Tajpore	...	...	...	...	...	...	...	NI	NI	NI	0.04	38.04	43.01
		Durbhanga	...	...	...	...	...	...	...	NI	NI	NI	0.01	33.77	40.24
	Moulvibazar	Moulvibazar	...	...	...	...	...	...	...	NI	NI	NI	0.01	30.01	41.24
		Moulvibazar	...	...	...	...	...	...	...	NI	NI	NI	0.01	40.01	43.00
	Chandpur	Moulvibazar	...	...	...	...	...	...	...	NI	NI	NI	0.02	35.02	39.76
		Chandpur	...	...	...	...	...	...	...	NI	NI	NI	0.13	33.13	41.42
	Barisal	Moulvibazar	...	...	...	...	...	...	...	NI	NI	NI	0.03	36.03	41.15
		Barisal	...	...	...	...	...	...	...	NI	NI	NI	0.08	41.08	41.16
	Barisal	Gopalganj	...	...	...	...	...	...	...	NI	NI	NI	0.02	44.02	47.40
		Barisal	...	...	...	...	...	...	...	NI	NI	NI	0.01	39.01	43.76
	North Bengal	Barisal	...	...	...	...	...	...	...	NI	NI	NI	0.01	32.01	43.83
		Barisal	...	...	...	...	...	...	...	NI	NI	NI	0.01	38.01	38.22
	North Bengal	Barisal	...	...	...	...	...	...	...	NI	NI	NI	NI	38.79	37.43
		Barisal	...	...	...	...	...	...	...	NI	NI	NI	?	31.27	?
	North Bengal	Barisal	...	...	...	...	...	...	...	NI	NI	NI	NI	39.04	?
		Barisal	...	...	...	...	...	...	...	NI	NI	NI	0.01	34.01	40.02
	North Bengal	Barisal	...	...	...	...	...	...	...	NI	NI	NI	0.02	34.02	40.16
		Barisal	...	...	...	...	...	...	...	NI	NI	NI	0.02	34.02	38.09
	North Bengal	Barisal	...	...	...	...	...	...	...	NI	NI	NI	NI	35.25	40.11
		Barisal	...	...	...	...	...	...	...	NI	NI	NI	NI	23.06	40.08
	North Bengal	Barisal	...	...	...	...	...	...	...	NI	NI	NI	0.01	21.52	35.85
		Barisal	...	...	...	...	...	...	...	NI	NI	NI	NI	17.30	38.70
NORTH BENGAL	Patna	Patna	...	...	...	...	...	...	...	NI	NI	NI	0.01	20.01	40.01
		Patna	...	...	...	...	...	...	...	NI	NI	NI	0.01	20.01	40.01
	Monghyr	Patna	...	...	...	...	...	...	...	NI	NI	NI	0.01	20.01	40.01
		Monghyr	...	...	...	...	...	...	...	NI	NI	NI	0.01	20.01	40.01
	South Bengal	Patna	...	...	...	...	...	...	...	NI	NI	NI	0.01	20.01	40.01
		South Bengal	...	...	...	...	...	...	...	NI	NI	NI	0.01	20.01	40.01
	South Bengal	Patna	...	...	...	...	...	...	...	NI	NI	NI	0.01	20.01	40.01
		South Bengal	...	...	...	...	...	...	...	NI	NI	NI	0.01	20.01	40.01
	South Bengal	Patna	...	...	...	...	...	...	...	NI	NI	NI	0.01	20.01	40.01
		South Bengal	...	...	...	...	...	...	...	NI	NI	NI	0.01	20.01	40.01
	South Bengal	Patna	...	...	...	...	...	...	...	NI	NI	NI	0.01	20.01	40.01
		South Bengal	...	...	...	...	...	...	...	NI	NI	NI	0.01	20.01	40.01
	South Bengal	Patna	...	...	...	...	...	...	...	NI	NI	NI	0.01	20.01	40.01
		South Bengal	...	...	...	...	...	...	...	NI	NI	NI	0.01	20.01	40.01
	South Bengal	Patna	...	...	...	...	...	...	...	NI	NI	NI	0.01	20.01	40.01
		South Bengal	...	...	...	...	...	...	...	NI	NI	NI	0.01	20.01	40.01
	South Bengal	Patna	...	...	...	...	...	...	...	NI	NI	NI	0.01	20.01	40.01
		South Bengal	...	...	...	...	...	...	...	NI	NI	NI	0.01	20.01	40.01
NORTH BENGAL	Hazaribagh	Hazaribagh	...	...	...	...	...	...	...	NI	NI	NI	0.00	24.00	40.78
		Hazaribagh	...	...	...	...	...	...	...	NI	NI	NI	0.00	24.00	40.78
	Lohardugga	Hazaribagh	...	...	...	...	...	...	...	NI	NI	NI	0.00	24.00	40.78
		Lohardugga	...	...	...	...	...	...	...	NI	NI	NI	0.00	24.00	40.78
	Lohardugga	Hazaribagh	...	...	...	...	...	...	...	NI	NI	NI	0.00	24.00	40.78
		Lohardugga	...	...	...	...	...	...	...	NI	NI	NI	0.00	24.00	40.78
	Lohardugga	Hazaribagh	...	...	...	...	...	...	...	NI	NI	NI	0.00	24.00	40.78
		Lohardugga	...	...	...	...	...	...	...	NI	NI	NI	0.00	24.00	40.78
	Lohardugga	Hazaribagh	...	...	...	...	...	...	...	NI	NI	NI	0.00	24.00	40.78
		Lohardugga	...	...	...	...	...	...	...	NI	NI	NI	0.00	24.00	40.78
	Lohardugga	Hazaribagh	...	...	...	...	...	...	...	NI	NI	NI	0.00	24.00	40.78
		Lohardugga	...	...	...	...	...	...	...	NI	NI	NI	0.00	24.00	40.78
	Lohardugga	Hazaribagh	...	...	...	...	...	...	...	NI	NI	NI	0.00	24.00	40.78
		Lohardugga	...	...	...	...	...	...	...	NI	NI	NI	0.00	24.00	40.78
	Lohardugga	Hazaribagh	...	...	...	...	...	...	...	NI	NI	NI	0.00	24.00	40.78
		Lohardugga	...	...	...	...	...	...	...	NI	NI	NI	0.00	24.00	40.78
	Lohardugga	Hazaribagh	...	...	...	...	...	...	...	NI	NI	NI	0.00	24.00	40.78
		Lohardugga	...	...	...	...	...	...	...	NI	NI	NI	0.00	24.00	40.78
	Lohardugga	Hazaribagh	...	...	...	...	...	...	...	NI	NI	NI	0.00	24.00	40.78
		Lohardugga	...	...	...	...	...	...	...	NI	NI	NI	0.00	24.00	40.78

Explanation.—Indicates that no rain has fallen. If the return for any day has not been received, the corresponding space is left blank. If any of the returns wanting, the corresponding spaces in the total rainfall column are left blank.

CALCUTTA, the 22nd December 1884.

**SUMMARY OF THE METEOROLOGICAL AND RAINFALL OBSERVATIONS  
TAKEN IN BENGAL DURING THE WEEK ENDING THE 19TH DECEMBER 1884.**

The meteorological conditions in Bengal, during the week ending the 19th, have been of the usual cold-weather character. At the close of the preceding week a fairly strong north-east monsoon was blowing over the whole Province, the cold-weather conditions in Bengal being intensified by the fact that the monsoon current blowing on the Madras coast was also of considerable strength. These conditions continued up to the 12th instant, but from the 13th to the 16th the Madras current weakened, and the rainfall on the Madras coast almost ceased, though there were some heavy showers in Ceylon. Rain was, however, probably falling at sea, and this accompanied or gave rise to a small cyclonic storm, the first indications of which were noticed on the 16th instant, and which developed slightly on the 17th, and approached the Madras coast on the 18th, striking it on that day between Madras and Negapatam, and passing across the greater part of the south of the Peninsula. The storm was not, however, accompanied by very strong winds, though it brought extremely heavy rain to some stations in its path, and Negapatam on the 19th reported no less than 10·84 inches of rain.

During the formation of this small storm, the north-east monsoon in Bengal rather fell off in strength, and winds became feeble and somewhat variable, though a very strong easterly set was noticeable in many instances. Temperature also commenced to rise with the alteration of wind direction, and in many instances humidity increased, though when the storm reached the land, and a strong monsoon again commenced to blow on the 18th and 19th instant over the southern coasts, these conditions were again reversed.

**Pressure**—Was at the commencement of the week considerably above the normal, but on the 18th and 14th a rather rapid fall occurred, which was followed on the 15th, 16th and 17th by an equal rise, while on the 18th and 19th pressure again decreased by small amounts at most stations. These changes were of the usual oscillatory character, and had no practical effect on the weather conditions. It is also to be noticed that the pressure in Bengal was scarcely, if at all, affected by the formation of the small storm in the south of the Bay, and it is therefore clear that it must have been only a shallow depression and of rather feeble character. The mean pressure for the week has continued to be decidedly in excess of the normal, and as in the previous week the excess was greatest in Behar, where the average excess pressure was about 0·08". In East Bengal it equalled 0·07", while in the other districts the excess varied from 0·05" to 0·04".

**Temperature**—During the previous week had been considerably below the normal, but, as noted above, with the alteration in wind directions, and with the falling off in the north-east current, temperature rose steadily for several days during the present week. On the 18th and 19th, however, temperature at most stations commenced to fall again slightly, but the mean temperature for the past week has been very nearly equal to the mean of previous years. The greatest variation from normal temperature has been at Chittagong, which shows a defect of 1·1°, while at the opposite extreme, Bankipore shows an excess of 1·6°. Taking, however, the averages for the districts, in most cases they show a temperature slightly in excess of the normal, the greatest excess being in Chutia Nagpur where it equalled 1·2°. The increase of temperature which has taken place during the past week has been principally in the night temperatures. This will be shown by the following table, which gives the normal and actual mean maximum and minimum temperatures at eight stations, and it will be noticed that, while in six out of eight cases the day temperatures have been *below* the average for the time of year, the night temperatures have been in five out of eight instances *above* the normal:—

	MAXIMUM DAY TEMPERATURE.		Difference.	MINIMUM NIGHT TEMPERATURE.		Difference.
	Normal average for week.	Actual average for week.		Normal average for week.	Actual average for week.	
Cuttack	82·7	81·8	—0·8	57·6	58·2	+0·6
Calcutta	75·8	76·2	+0·4	54·9	55·7	+0·8
Burdwan	77·4	77·2	—0·2	54·7	56·6	+1·9
Jessore	78·0	77·6	—0·4	53·3	53·2	—0·1
Dacca	78·2	77·9	—0·3	56·1	55·3	—0·8
Patna	74·6	73·6	—0·7	48·7	52·6	+3·9
Purneah	78·6	77·5	—0·9	48·8	48·1	—0·7
Hasaribagh	71·8	71·3	—0·5	49·2	52·1	+2·9

**Rainfall**—Has been entirely absent over the whole Province except on the 14th instant, when at three stations in North Bengal slight showers were reported. The largest amount was at Panchbibi, which, however, received only 0·23 inch, while at Kalimpong and Dinagepore the amounts recorded were even smaller than this.

The following table gives the summary of the temperature and rainfall data of each of the seven meteorological divisions of the Province for the week ending Friday, the 19th December 1884 :—

METEOROLOGICAL DIVISIONS.	TEMPERATURE.						RAINFALL.									
	Highest observed during week.	Lowest observed during week.	Averages for week.			Average mean of week above or below normal mean of week.	Of week.		Rainy days.			Since 1st of month.		Since 1st of May.		
			Of highest of each day.	Of lowest of each day.	Of mean for each day.		Average.	Normal average.	Variation.	Average number in week.	Normal average number in week.	Variation.	Average.	Normal average.	Average.	Normal average.
Assam	85°6	51°6	72°3	57°8	67°8	-0°2	Nil	Nil	Nil	0°0	0°0	0	Nil	0°38	51°70	60°46
South-West Bengal	79°3	51°2	77°1	55°2	66°2	+0°4	Nil	Nil	Nil	0°0	0°0	0	Nil	0°21	44°51	51°28
East Bengal	80°4	47°1	77°8	53°0	65°1	-0°9	Nil	0°01	-0°01	0°0	0°1	-0°1	Nil	0°40	50°48	75°68
North Bengal	78°6	48°3	76°2	52°3	64°3	—	0°01	0°02	-0°01	0°1	0°1	0	0°1	0°16	55°18	72°00
North Behar	78°6	42°3	75°5	49°5	62°5	+0°5	Nil	Nil	Nil	0°0	0°0	0	Nil	0°03	39°10	47°10
South Behar	78°3	44°1	75°9	51°6	62°4	+0°4	Nil	Nil	Nil	0°0	0°0	0	Nil	0°08	30°27	42°58
Chota Nagpur	72°3†	46°9†	70°9†	51°5†	61°1†	+1°2†	Nil	Nil	Nil	0°0	0°0	0	Nil	0°10	30°40	47°41

\* Burrail not included.  
† Chybam not included.

METEOROLOGICAL OFFICE, BENGAL;

ALEXANDER PEDLER,

The 22nd December 1884.

Offg. Meteorological Reporter to the Govt. of Bengal



**Results of the Meteorological Observations taken at the Alipore Observatory from  
14th to 20th December 1884.**

Month.	Date.	Maximum in sun.	Number of hours of bright sunshine.	Mean pressure barometer at 32° Fahr.	TEMPERATURE.				HYGROMETRY.				Wind.	Miles recorded.	Rain.	Weather.
					Mean.	Maximum.	Range.	Minimum.	Mean wet bulb.	Vapour tension.	Dew point.	Humidity.				
1884.		°		Inches.	°	°	°	°	°	Inches.	°	%.			Inches.	
Dec.	14th	129.4	9.4	30.083	64.4	77.1	22.0	54.6	59.2	0.438	55.2	74	NNW and NW ...	83	Nil.	Chiefly clear
"	15th	130.4	9.3	30.070	65.0	76.1	19.3	56.8	60.1	0.440	56.5	70	NE, NNW and N by E.	80	"	Chiefly clear,
"	16th	131.0	9.3	30.068	66.2	78.8	18.2	57.9	60.0	0.439	55.3	73	N by E and NNW ...	77	"	Chiefly clear,
"	17th	128.3	8.6	30.120	64.7	75.6	19.8	56.3	59.1	0.429	54.6	73	NNW and N by E	83	"	Chiefly clear,
"	18th	128.3	8.3	30.009	63.6	74.0	20.2	54.7	58.6	0.428	54.6	74	NNW and N by E	83	"	Partially cloudy,
"	19th	121.6	7.6	30.066	63.3	74.1	19.4	54.7	57.8	0.450	56.0	72	N by E and N	86	"	Partially cloudy,
"	20th	126.7	9.8	30.118	64.5	75.8	20.7	55.1	59.2	0.426	55.1	71	E by N and NNE ...	70	"	Partially cloudy

The mean pressure of the seven days

The average pressure of the corresponding period for 24 years, S. G.'s Office

The total number of hours of bright sunshine

The maximum possible number of hours of sunshine

The mean temperature of the seven days

The average temperature of the corresponding period for 24 years, S. G.'s Office

The extreme variation of temperature

The maximum temperature

The highest velocity of the wind in one hour

The highest pressure of wind on one square foot

The mean relative humidity

The average relative humidity of the corresponding period for 24 years, S. G.'s Office

The total fall of rain from 14th to 20th December 1884

The average fall of the corresponding period for 24 years, S. G.'s Office

The total fall from 1st January to 20th December 1884

The average fall of the corresponding period for 24 years, S. G.'s Office

The mean pressure, temperature, &c., are deduced from the traces of the Barograph and Thermograph, and from observations made at 6h, 10h, 16h, and 22h.

The maximum and minimum temperatures are obtained from self-registering thermometers. All the thermometers are verified, and the readings have been corrected to a standard constructed and verified at the Kew Observatory. They are exposed under a thatched shed open at the sides, and are suspended four feet above the ground.

The barometer readings are corrected approximately to those of the standard Newman's No. 86 formerly at the Surveyor-General's Office.

The hygrometric elements are obtained from Tables III, IV, and V of the official tables computed in the Meteorological Office, and based on Regnault's modifications of August's formula.

The directions and the movement of the wind are taken from the trace of a Beckley's anemograph.

The mouth of the rain-gauge is one foot above the ground.

△ dew.

W. L. DALLAS,

METEOROLOGICAL OFFICE, INDIA;  
Calcutta, the 22nd December 1884.

For Meteorological Reporter to the Government of India.

Results of the Thermometrical Observations taken at the Meteorological Office,  
Chowringhee, from 14th to 20th December 1884.

MONTH.	DATE.	TEMPERATURE.				Mean wet bulb.	HYGROMETRY.			Rain.
		Mean.	Maximum.	Range.	Minimum.		Vapour tension.	Dew point.	Humidity.	
		°	°	°	°	°	Inches.	°	%	Inches.
December	14th	66.7	78.4	12.0	56.1	60.6	.440	58.0	69	Nil
"	15th	65.8	77.9	22.0	55.9	61.3	.484	58.0	70	"
"	16th	66.3	77.2	2.6	54.6	61.0	.489	57.1	73	"
"	17th	66.4	77.1	19.8	57.3	60.7	.458	56.4	70	"
"	18th	65.4	75.9	21.0	54.9	59.9	.444	55.8	71	"
"	19th	64.3	75.1	21.4	54.7	59.6	.451	56.1	75	"
"	20th	65.9	77.4	21.0	54.9	60.7	.483	56.8	79	"

The mean temperature of the seven days ... 65.8

The extreme variation of temperature ... 23.7

The maximum temperature ... 78.4

The mean relative humidity ... 72

The total fall of rain from 14th to 20th December 1884 ... Nil

The mean temperature and humidity are obtained by applying to the mean of the 10h, 16h and minimum readings a correction dependent on the range, and derived from the hourly observations at the Surveyor-General's Office, Chowringhee, in past years.

METEOROLOGICAL OFFICE, INDIA;  
Calcutta, the 22nd December 1884.

W. L. DALLAS.  
for Meteorological Reporter to the Govt. of India.

## MEMORANDA.

The annexed table exhibits the mortuary statistics of the districts in Bengal for the month of October 1884. The leading features revealed by it are—

1. That 115,763 deaths were registered among a population of 66,163,884, presenting a death-rate of 20.88 per 1,000 per annum, against 18.12 per 1,000 during the preceding month, and 19.56 per 1,000 during the corresponding month of 1883.

2. That the highest death-rates were reported to have occurred in the undermentioned districts.—

Districts.			Districts.		
		Ratio per mille.			Ratio per mille.
Pubna	...	40.33	Gya	...	26.76
Nuddea	...	36.96	Cuttack	...	25.82
Rajshahye	...	36.00	Khulna	...	25.68
Bogra	...	35.52	Burdwan	...	24.84
Moorshedabad	...	27.96	Dacca	...	24.36
Jessore	...	27.12	Backergunge	...	24.12

3. That the mortality from the specific heads of disease stands as noted below :—

			Ratio per mille during—	
			October 1884.	October 1883.
Cholera	...	...	96	36
Small-pox	...	...	06	02
Fever	...	...	15.86	15.48
Bowel-complaints	...	...	84	72
Injury	...	...	35	86
Other causes	...	...	2.52	2.40

indicating, in comparison with the outcome of the corresponding month of the previous year, a fractional increase of mortality from every death-cause excepting injury, the casualties from which exhibit no variation.

4. That the incidence of small-pox, bowel-complaints and injury was, on the whole, normal in every district, but that the rest of the diseases proved conspicuously fatal to life in the following districts :—

Cholera.		Fever.		Other Causes.	
	Ratio per mille.		Ratio per mille.		Ratio per mille.
Bogra	7.56	Rajshahye	33.48	Poori	10.68
Cuttack	6.96	Nuddea	33.12	Sarun	8.76
Pubna	6.76	Pubna	32.64		
Faridpore	4.32	Bogra	26.56		
Poori	4.08	Moorshedabad	25.44		
Dacca	2.28	Jessore	25.32		
		Gya	22.56		
		Burdwan	21.24		

5. That distributed under the heads of *Sex*, *Class* and *Age*, the mortality of the month under review stands as follows :—

According to Sex.		According to Class.		According to Age.	
	Ratio per mille.		Ratio per mille.		Ratio per mille.
Males	22.68	Christians	12.12	Under 1 year	117.36
Females	19.44	Hindus	20.52	1 and under 5 years	25.08
Ratio of male deaths to every 100 female deaths	114	Mahomedans	22.20	5 " 10 "	12.96
		Budhists	12.24	10 " 15 "	10.56
		Other classes	16.92	15 " 20 "	14.28
				20 " 25 "	13.68
				25 " 30 "	15.12
				30 " 35 "	20.28
				35 " 40 "	29.52
				40 " 45 "	49.32

R. LIDDERDALE, M.D., Deputy Surgeon-General,

The 22nd December 1884.

Sanitary Commissioner for Bengal

*Statement showing the Results of the Registration of Deaths in the Districts in Bengal for the month of October 1884.*

[illegible]

[illegible]

OFFICE OF SANITARY COMMISSIONER FOR BENGAL,  
The 22<sup>nd</sup> December 1884.



## MEMORANDA.

The birth and death returns of the first class Municipalities in Bengal, for the week ending 6th December 1884, present the following results:—

1. That births and deaths were recorded in these Municipalities at the rates, respectively, of 20.5 and 37.6 per 1,000 of population, as opposed to 31.6 and 42.3 per 1,000, respectively, during the preceding week ending 29th November, indicating a considerable falling off in the record of both events.

2. That these events were registered at the highest rates in the undermentioned Municipalities:—

Births.			Deaths.		
		Ratio per mille.			Ratio per mille.
Purneah	...	96.9	Purneah	...	43.1
Moohyr	...	40.7	Poori	...	33.4
Howrah	...	39.4	Serampore	...	62.8
Gya	...	32.8	Hughli	...	59.0
Durbianga	...	32.3	Bhagulpore	...	55.2
Serampore	...	31.4	Chittagong	...	51.6
Midnapore	...	31.0	Suburbs of Calcutta	...	50.7
Burdwan	...	30.5	Beaulah	...	49.9
Bhagulpore	...	29.9	Jessore	...	49.0
			Midnapore	...	43.4
			Dacca	...	41.5
			Kishnaghur	...	39.8
			Howrah	...	38.5
			Uttarpara	...	37.8
			Burdwan	...	36.6
			Santipore	...	35.0
			Patna	...	29.8

3. That the mortality from the principal diseases exhibited below, contrasted with the death rates from the same causes in the preceding week, stands as follows:—

	Ratio per mille during the weeks ending—	
	6th December 1884.	29th November 1884.
Cholera	3.9	5.0
Small-pox	8	1
Fever	18.1	10.6
Bowel-complaints	5.5	6.6
Injury	4	6
Other causes	9.4	10.5

The above figures indicate that there was a diminution of mortality from all diseases except small-pox, the death-rate from which exhibited a fractional increase.

4. That excluding injury, the mortality from which was high nowhere, the rest of the diseases proved most fatal to life in the following Municipalities:—

Cholera.	Small-pox.	Fever.	Bowel-complaints.	Other Causes.
Ratio per mille.	Ratio per mille.	Ratio per mille.	Ratio per mille.	Ratio per mille.
Chittagong ... 28.2	Beaulah ... 13.1	Purneah ... 69.2	Chittagong ... 11.7	Poori ... 23.5
Serampore ... 15.7		Jessore ... 42.8	Midnapore ... 10.8	Kishnaghur ... 20.8
Suburbs of Calcutta ... 8.7		Hughli ... 41.6	Bhagulpore ... 10.0	Midnapore ... 15.5
Howrah ... 6.0		Poori ... 32.1	Suburbs of Calcutta ... 9.1	Suburbs of Calcutta ... 14.3
Bhagulpore ... 6.8		Santipore ... 31.5		Beaulah ... 13.1
Dacca ... 4.5		Uttarpara ... 28.3		Serampore ... 11.8
		Serampore ... 27.5		Dacca ... 11.3
		Bhagulpore ... 27.1		Gya ... 11.3
		Burdwan ... 24.4		Bhagulpore ... 10.0
		Dacca ... 22.7		Hughli ... 10.7

5. That with regard to mortality referable to Sex, Class and Age, the rates stand as follows:—

According to Sex.		According to Class.		According to Age.	
	Ratio per mille.		Ratio per mille.		Ratio per mille.
Males ...	40.5	Christians ...	30.4	Under 1 year	262.5
Females ...	34.3	Hindus ...	38.4	1 and under 5 years	54.1
Ratio of male deaths to every 100 female deaths ...	134	Mahomedans ...	35.8	6 " 10 "	28.4
		Budhists ...	48.4	10 " 15 "	16.8
		Other classes ...	72.8	15 " 20 "	26.6
				20 " 30 "	27.4
				30 " 40 "	29.7
				40 " 50 "	31.5
				50 " 60 "	47.0
				60 years and upwards	74.3

R. LIDDERDALE, M.D., Deputy Surgeon-General.

Sanitary Commissioner for Bengal.

The 22nd December 1884.

## Statement showing the Results of the Registration of Births and Deaths in the First Class Municipalities in Bengal during the week ending 6th December 1884.

DISTRICTS.	NAMES OF MUNICIPALITIES.	POPULATION.			BIRTHS.			MORTALITY ACCORDING TO—										SEX.						
		Males.	Females.	Total.	NUMBER OF—	RATIO PER 1,000 OF POPULATION PER ANNUM.			RATIO PER 1,000 OF POPULATION PER ANNUM.										Males.	Females.	Ratio of male deaths to every 100 female deaths.			
						Total.	Males.	Females.	DISEASE.															
									Total.	Males.	Females.	RATIO PER 1,000 OF POPULATION PER ANNUM.												
												Total.	Males.	Females.	RATIO PER 1,000 OF POPULATION PER ANNUM.									
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## MORTALITY ACCORDING TO—

Age.

Class.

NAMES OF MUNICIPAL  
PALICIES.

RATIO PER 1,000 OF POPULATION PER ANNUM.

RATIO PER 1,000 OF POPULA-  
TION PER ANNUM.

Deaths.

RATIO PER 1,000 OF POPULATION PER ANNUM.

DISTRICTS.	MALES.	FEMALES.	Both sexes.	Other classes.	Hindus.	Muslims.	Christians.	Others.	Under 1 year.	1 and under 5 years.	5 and under 10 years.	10 and under 15 years.	15 and under 20 years.	20 and under 25 years.	25 and under 30 years.	30 and under 35 years.	35 and under 40 years.	40 and under 45 years.	45 and under 50 years.	50 and under 55 years.	55 and under 60 years.	60 years and upwards.
Burdwan	22	22	44	101	487	101	487	101	7	1	1	1	1	1	1	1	1	1	1	1	1	1
Midnapore	24	24	48	598	481	598	481	598	6	1	1	1	1	1	1	1	1	1	1	1	1	1
Hughli	27	27	54	553	509	553	509	553	7	1	1	1	1	1	1	1	1	1	1	1	1	1
Serenampore	33	33	66	524	489	524	489	524	7	1	1	1	1	1	1	1	1	1	1	1	1	1
Howrah	54	54	108	524	354	524	354	524	14	1	1	1	1	1	1	1	1	1	1	1	1	1
Suburbs of Calcutta	130	130	260	301	520	301	520	301	45	1	1	1	1	1	1	1	1	1	1	1	1	1
Kolkata	15	15	30	377	410	377	410	377	7	1	1	1	1	1	1	1	1	1	1	1	1	1
Banshat	3	3	6	...	213	...	213	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sanipore	13	13	26	...	403	...	403	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Jessore	2	2	4	...	241	...	241	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Rampore Bazar	7	7	14	...	367	...	367	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Darjiling	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Dacca	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Chittagong	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Coxibazar	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Fata City	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Gya	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Arar	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Moulvibazar	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Durban	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Chuprah	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Blugulpore	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Monghyr	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Purneah	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Poori	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
TOTAL	7	7	14	723	484	723	484	723	133	114	80	35	40	145	104	97	60	116	541	234	158	470

R. LIDDERDALE, M.D., Deputy Surgeon-General,  
Sanitary Commissioner for Bengal.

OFFICE OF SANITARY COMMISSIONER FOR BENGAL.

The 22nd December 1884.

**PUBLIC WORKS DEPARTMENT—BENGAL.**

## IRRIGATION BRANCH.

Observation showing brights over mean sea-level and low water on the Rivers Ganges, Brahmaputra, Jellinghee, and Brahmaputra for the month of November 1884.

Date.	River Ganges.										River Brahmaputra.	
	Mirzapore.	Benares.	Enns.	Dinapore.	Moughyr.	Sahibganj.	Rampore Esambeh.	Goalundo.	Berhampore.	Krishnachur.	Height over mean of gauge.	Height over mean of gauge.
1st	10.35	10.75	11.25	10.90	11.10	11.35	11.60	11.80	12.00	12.20	12.40	12.50
2nd	10.35	10.75	11.25	10.90	11.10	11.35	11.60	11.80	12.00	12.20	12.40	12.50
3rd	10.35	10.75	11.25	10.90	11.10	11.35	11.60	11.80	12.00	12.20	12.40	12.50
4th	10.35	10.75	11.25	10.90	11.10	11.35	11.60	11.80	12.00	12.20	12.40	12.50
5th	10.35	10.75	11.25	10.90	11.10	11.35	11.60	11.80	12.00	12.20	12.40	12.50
6th	10.35	10.75	11.25	10.90	11.10	11.35	11.60	11.80	12.00	12.20	12.40	12.50
7th	10.35	10.75	11.25	10.90	11.10	11.35	11.60	11.80	12.00	12.20	12.40	12.50
8th	10.35	10.75	11.25	10.90	11.10	11.35	11.60	11.80	12.00	12.20	12.40	12.50
9th	10.35	10.75	11.25	10.90	11.10	11.35	11.60	11.80	12.00	12.20	12.40	12.50
10th	10.35	10.75	11.25	10.90	11.10	11.35	11.60	11.80	12.00	12.20	12.40	12.50
11th	10.35	10.75	11.25	10.90	11.10	11.35	11.60	11.80	12.00	12.20	12.40	12.50
12th	10.35	10.75	11.25	10.90	11.10	11.35	11.60	11.80	12.00	12.20	12.40	12.50
13th	10.35	10.75	11.25	10.90	11.10	11.35	11.60	11.80	12.00	12.20	12.40	12.50
14th	10.35	10.75	11.25	10.90	11.10	11.35	11.60	11.80	12.00	12.20	12.40	12.50
15th	10.35	10.75	11.25	10.90	11.10	11.35	11.60	11.80	12.00	12.20	12.40	12.50
16th	10.35	10.75	11.25	10.90	11.10	11.35	11.60	11.80	12.00	12.20	12.40	12.50
17th	10.35	10.75	11.25	10.90	11.10	11.35	11.60	11.80	12.00	12.20	12.40	12.50
18th	10.35	10.75	11.25	10.90	11.10	11.35	11.60	11.80	12.00	12.20	12.40	12.50
19th	10.35	10.75	11.25	10.90	11.10	11.35	11.60	11.80	12.00	12.20	12.40	12.50
20th	10.35	10.75	11.25	10.90	11.10	11.35	11.60	11.80	12.00	12.20	12.40	12.50
21st	10.35	10.75	11.25	10.90	11.10	11.35	11.60	11.80	12.00	12.20	12.40	12.50
22nd	10.35	10.75	11.25	10.90	11.10	11.35	11.60	11.80	12.00	12.20	12.40	12.50
23rd	10.35	10.75	11.25	10.90	11.10	11.35	11.60	11.80	12.00	12.20	12.40	12.50
24th	10.35	10.75	11.25	10.90	11.10	11.35	11.60	11.80	12.00	12.20	12.40	12.50
25th	10.35	10.75	11.25	10.90	11.10	11.35	11.60	11.80	12.00	12.20	12.40	12.50
26th	10.35	10.75	11.25	10.90	11.10	11.35	11.60	11.80	12.00	12.20	12.40	12.50
27th	10.35	10.75	11.25	10.90	11.10	11.35	11.60	11.80	12.00	12.20	12.40	12.50
28th	10.35	10.75	11.25	10.90	11.10	11.35	11.60	11.80	12.00	12.20	12.40	12.50
29th	10.35	10.75	11.25	10.90	11.10	11.35	11.60	11.80	12.00	12.20	12.40	12.50
30th	10.35	10.75	11.25	10.90	11.10	11.35	11.60	11.80	12.00	12.20	12.40	12.50

C. W. ODLING,

*Under-Secy. to the Government of Bengal.*

Dated 23rd December 1944.

## PUBLIC WORKS DEPARTMENT, IRRIGATION BRANCH, BENGAL

Statements showing the total amount of Traffic and Tolls on the Canals classed as Productive Public Works for the month of October 1884.

## ORISSA CIRCLE.

## Taldunda Canal.

LENGTH OF CANAL OPEN—27½ MILES.

Number of boats.	Nature of Cargo.	APPROXIMATE		TONNAGE OF BOATS.		Ton-mileage.	Tollage.	Rate of toll per ton-mile.
		Weight of cargo.	Value of cargo.	Maunds.	Tons.			

## LOCAL TRAFFIC.

## (1)—PRIVATE.

	ARTICLES OF FOOD.	Mds.	Rs.				Rs. A. P.	A. P.
8	Paddy	1,405	1,150	2,292	82	1,470	11 0 0	...
1	Rice	24	50	34	1	24	0 4 0	...
1	Jaggery	91	400	144	0	120	1 4 0	...
	BUILDING MATERIALS.			2,641				
4	Sand cutstone	1,780	210		101	2,525	23 0 3	...
	Unwrought timber and geylo (1 in number)		20				0 0 2	...
	Bamboo (500 in number)						0 5 0	...
	FUEL.							
1	Charcoal	122	20	179	4	90	0 14 0	...
	MISCELLANEOUS.							
9	Passenger boat			8,000	280	867	40 0 0	...
21	Empty do.			5,015	111	1,609	13 2 0	...
48	Total	3,422	1,920	19,464	690	7,005	60 13 11	0 2 8
50	Total of same month last year	3,033	5,366	44,004	1,878	11,074	206 3 10	0 2 1

## (2)—STORES AND MATERIALS FOR IRRIGATION WORKS.

		Mds.	Rs.				Rs. A. P.	
23	Sand cutstone	9,082	1,506	10,503	803	11,247	100 12 0	...
21	Empty boats			6,312	225	3,825	14 2 0	...
44	Total	9,082	1,506	16,815	818	15,072	127 14 0	0 1 0
8	Total of same month last year	2,260	94	5,905	213	1,010	15 9 1	0 2 0

## ABSTRACT.

		Mds.	Rs.				Rs. A. P.	
40	Private, including miscellaneous	3,422	1,920	19,464	690	7,005	60 13 11	...
44	Government stores, including ditto	9,082	1,506	16,815	818	15,072	127 14 0	...
80	Grand Total	12,504	3,426	36,279	1,508	22,077	224 11 11	...
50	Grand Total of same month last year	5,293	5,366	50,009	1,780	12,608	220 13 11	...

## MEMO.

	Rs. A. P.
Unrecovered balance on the 1st of the month	40 9 10
Amount of tolls for the month	221 11 11
Total	262 9 9
Amounts credited in the accounts for the month	168 7 10
Balance at the end of the month	94 13 11

## Kendrapara Canal and its Branch to Gundakia on the Gobri River.

LENGTH OF CANAL OPEN—69 MILES.

## LOCAL TRAFFIC.

(1)—PRIVATE.

No. of boats.	Nature of Cargo.	APPROXIMATE.		TOWNSHIP OF BOATS.		Ton-milage.	Tollage.	Rate of toll per ton-mile.	
		Weight of cargo.	Value of cargo.	Mds.	Tons.			Rs. A. P.	A. P.
ARTICLES OF FOOD.									
104	Paddy	8,500	18,700	17,895	830	10,927	219 15 0	...	...
121	Rice	42,000	1,20,000	64,055	3,002	1,44,500	1,647 7 2	...	...
1	Coriander	50	100	184	7	280	1 10 0	...	...
6	Gram	500	2,100	1,090	80	1,405	14 9 0	...	...
12	Jaggery	1,050	2,250	2,118	75	1,412	21 4 4	...	...
2	Sugar	80	800	176	8	102	2 2 2	...	...
15	Salt	1,800	5,500	3,408	121	2,592	28 5 6	...	...
1	Betel leaves...	20	40	15	2	15	0 4 10	...	...
7	Spices	1,000	20,000	2,477	88	8,890	88 10 0	...	...
2	Fish (dry)	50	500	123	4	158	1 6 7	...	...
CLOTHING.									
1	Cotton piece-goods (Indian)	100	2,000	293	11	440	3 8 6	...	...
STAPLES OF MANUFACTURE.									
1	Iron	80	130	51	3	80	0 4 6	...	...
8	Cotton twist and yarn (European)	2,000	25,000	3,660	138	6,900	70 7 2	...	...
4	Hides	700	7,000	1,670	64	2,724	35 10 1	...	...
1	Castor seed	80	80	60	2	60	0 9 8	...	...
BUILDING MATERIALS.									
10	Building-stones	2,400	80	2,672	131	3,456	45 0 6	...	...
14	Unwrought timber and piles (76 in number)	4,000	10,000	6,677	268	12,332	152 4 7	...	...
	Bamboos (10,525 in number)		150				10 2 5	...	...
FUEL.									
18	Firewood	2,100	210	2,350	200	5,910	27 12 0	...	...
COOKING UTENSILS AND OTHER DOMESTIC IMPLEMENTS.									
8	Earthenware and earthen pots	240	30	316	13	712	7 0 0	...	...
MISCELLANEOUS.									
61	Passenger boats (4,434 passengers in number)			24,044	657	44,371	441 3 2	...	...
280	Empty ditto			45,531	1,630	58,930	352 11 4	...	...
2	Shells	50	240	105	4	154	1 10 0	...	...
45	Miscellaneous goods, &c.	8,500	50,000	15,972	538	22,186	153 10 1	...	...
1	Furniture	100	200	285	12	400	0 9 4	...	...
705	Total	74,840	2,08,910	2,10,057	7,821	212,820	2,341 15 2	0 1 1/2	
860	Total of same month last year	72,360	2,02,310	1,88,175	6,720	224,053	2,112 12 8	0 1 0	

## (2)—STORES AND MATERIALS FOR IRRIGATION WORKS.

	MISCELLANEOUS.	Mds.	Rs.	Rs.		Rs. A. P.	A. P.
2	Empty boats			548	19	708	4 6 3
2	Total			548	19	708	4 6 3
24	Total of same month last year	8,950	1,840	20,583	785	27,604	265 6 0

## ABSTRACT.

		Mds.	Rs.	Rs.		Rs. A. P.	
705	Private, including miscellaneous	74,840	2,08,910	2,10,057	7,821	212,820	2,341 15 2
2	Government stores, including ditto			548	19	708	4 6 3
705	Grand Total	74,840	2,08,910	2,10,605	7,840	213,528	2,346 5 11 1/2
744	Grand Total of same month last year	72,360	2,02,310	2,06,733	7,485	221,637	2,338 3 0
Amount refunded						250 0 0	
						2,748 3 0	

## MEMO.

Unrecovered balance on the 1st of the month ...  
 Amount of tollage for the month ...  
 Amount credited in the accounts for the month ...  
 Balance at the end of the month ...

## Rs. A. P.

4,981 2 1  
 2,346 5 11  
 9,327 8 0  
 2,424 4 5  
 5,003 5 7

\* Of this Rs. 554-2-5 is the collection of Gobri Canal Locks Rs. 811-15-9 is the collection of Kendrapara Extension Locks, and Rs. 2,164-3-0 is the collection of Kendrapara Canal Locks.



## High Level Canal, Range I.

LENGTH OF CANAL OPEN—34 MILES.

## LOCAL TRAFFIC.

(1)—PRIVATE.

Number of boats.	Nature of Cargo.	APPROXIMATE		TONNAGE OF BOATS.		Ton-mileage.	Tollage.	Rate of toll per ton-mile.
		Weight of cargo.	Value of cargo.	Maunder.	Tons.			
	ARTICLES OF FOOD.	Mds.	Rs.				Rs. A. P.	A. P.
28	Paddy	2,300	2,300	4,303	130	5,100	40 14 0	...
31	Rice	7,400	22,200	13,298	474	15,850	134 3 0	...
7	Cocoanuts	500	500	834	30	800	10 0 0	...
7	Jaggery	...	400	127	5	103	1 0 0	...
26	Salt	6,000	16,000	8,661	610	10,425	100 7 0	...
1	Turmeric	100	500	145	0	145	1 0 0	...
1	Fish (dry)	10	50	43	2	34	0 6 0	...
	BUILDING MATERIALS.							
1	Shooting line	100	50	148	5	143	1 0 0	...
3	Unwrought timber and piles (450 in No.)	300	1,000	481	17	443	01 15 0	...
	COOKING UTENSILS AND OTHER DOMESTIC IMPLEMENTS.							
1	Kitchenware and earthenware	100	10	109	8	105	1 14 4	...
	MISCELLANEOUS.							
8	Passenger boat (19 passengers in No.)	...	...	1,121	40	010	5 1 2	...
120	Empty ditto	1,500	...	11,123	300	10,844	52 4 0	...
21	Straw	100	400	3,382	125	1,061	11 6 0	...
1	Chalk	5,000	500	140	5	204	2 3 0	...
40	Miscellaneous goods, &c.	...	10,000	9,493	250	9,060	100 11 0	...
362	Total	22,500	54,440	53,826	1,922	56,825	544 7 4	0 1 8
324	Total of same month last year	20,750	52,400	51,370	1,870	55,478	500 10 0	0 2 4

## (2)—STORES AND MATERIALS FOR IRRIGATION WORKS.

		Mds.	Rs.				Rs. A. P.	A. P.
	NU							
	Total							
3	Total of same month last year	104	370	1,300	43	1,410	19 2 8	0 2 4

## ABSTRACT.

		Mds.	Rs.				Rs. A. P.	
361	Private, including miscellaneous	22,500	54,440	53,826	1,922	56,825	544 7 4	...
...	Government stores, including ditto	...	...	...	...	...	...	...
365	Grand Total	22,500	54,440	53,826	1,922	56,825	544 7 4	...
327	Grand Total of same month last year	20,750	52,400	51,370	1,870	55,478	500 10 0	...

## MEMO.

## Rs. A. P.

Unrecovered balance on the 1st of the month	...	...	...	...	...	...	207 12 0
Amount of tolls for the month	...	...	...	...	...	...	544 7 4
Total	...	...	...	...	...	...	843 4 8
Amount credited in the accounts for the month	...	...	...	...	...	...	477 5 0
Balance at the end of the month	...	...	...	...	...	...	366 18 8

## High Level Canal, Range II.

LENGTH OF CANAL OPEN—12½ MILLS.

Number of boats.	Nature of Cargo.	APPROXIMATE		TONNAGE OF BOATS.		Tonnage.	Tonnage.	Rate of toll per ton-mile.
		Weight of cargo.	Value of cargo.	Mounds.	Tons.			

## LOCAL TRAFFIC.

## (1)—PRIVATE.

ARTICLES OF FOOD.		Mds.	Rs.				Rs. A. P.	A. P.
15	Paddy	3,186	1,500	2,431	87	882	15 1 6	.....
40	Rice	5,540	10,800	6,425	230	2,901	40 1 6	.....
2	Turmeric	100	200	311	11	132	1 13 0	.....
6	Salt	1,500	4,300	3,298	118	924	20 0 9	.....
1	Tamarind	50	100	183	7	75	1 3 0	.....
2	Coconuts	240	200	431	15	180	2 11 0	.....
STAPLES OF MANUFACTURE.								
2	Caster seed	540	2,000	1,075	53	450	6 11 9	.....
FUEL.								
2	Firewood	100	10	102	0	42	3 5 0	.....
MISCELLANEOUS.								
2	Passenger boat (1 in number)	.....	.....	254	9	100	7 8 0	.....
70	Empty ditto	.....	.....	6,211	221	2,510	19 4 6	.....
2	Gunny bags	200	1,000	450	19	169	2 13 0	.....
2	Small dongs (67 in number)	.....	.....	.....	.....	.....	16 0 6	.....
2	Lac	100	700	575	21	240	4 0 6	.....
140	Total	7,500	21,110	21,832	779	8,744	124 13 0	0 2 9
107	Total of same month last year	7,100	23,290	19,608	702	6,860	141 15 6	0 3 9

## (2)—STORES AND MATERIALS FOR IRRIGATION WORKS.

BUILDING MATERIALS.		Mds.	Rs.				Rs. A. P.	A. P.
17	Gravel	4,000	60	7,444	224	1,350	40 0 0	.....
MISCELLANEOUS.								
10	Empty boats	.....	.....	2,010	75	420	6 9 8	.....
27	Total	4,000	60	9,454	338	1,970	23 0 0	0 3 9
11	Total of same month last year	2,300	100	7,000	254	644	28 10 8	0 11 2

## ABSTRACT.

	Mds.	Rs.				Rs. A. P.	
145	Private, including miscellaneous	7,500	21,110	21,832	779	8,744	124 13 0
27	Government stores, including ditto	4,000	60	9,454	338	1,970	23 0 0
172	Grand Total	11,500	21,170	31,286	1,117	10,714	187 13 0
118	Grand Total of same month last year	9,400	23,430	20,768	926	7,824	180 10 0

Memo.	Rs. A. P.
Unrecovered balance on the 1st of the month	180 11 0
Amount of tollage for the month	187 13 0
Total	368 5 0
Amounts credited in the accounts for the month	186 2 3
Balance at the end of the month	182 3 3

## High Level Canal, Range III.

LENGTH OF CANAL OPEN—20 MILES.

Number of boats.	Nature of Cargo.	APPROXIMATE		TONNAGE OF BOATS.		Ton-mileage.	Tollage.	Rate of toll per ton mile.
		Weight of cargo.	Value of cargo.	Maunder.	Tons.			

## LOCAL TRAFFIC.

## (1)—PRIVATE.

ARTICLES OF FOOD.		Mds.	Rs.				Rs. A. P.	A. P.
26	Rice	1,200	6,500	4,183	149	2,140	25 15 6	...
1	Tamarind	100	200	211	7	120	1 0 0	...
1	Coconut	50	50	104	4	72	0 10 0	...
1	Turmeric	50	250	147	5	100	0 14 6	...
1	Mustard	200	500	318	11	108	2 0 0	...
1	Salt	300	1,000	551	20	141	3 7 0	...
MISCELLANEOUS.								
26	Empty boats	...	...	1,323	44	310	3 11 3	...
53	Total	2,000	8,800	6,729	210	3,327	37 15 9	0 2 2
27	Total of same month last year	1,830	7,020	4,545	103	2,368	29 7 0	0 2 4

## (2)—STORES AND MATERIALS FOR IRRIGATION WORKS.

BUILDING MATERIALS.		Mds.	Rs.				Rs. A. P.	A. P.
5	Gravel	2,500	40	4,075	148	2,280	25 5 6	...
5	Shooting	500	100	807	29	343	5 0 6	...
MISCELLANEOUS.								
7	Empty boats	...	...	1,805	64	642	4 9 0	...
77	Total	3,000	140	6,084	230	3,265	30 2 0	0 2 1
...	Total of same month last year	...	...	...	...	...	...	...

## ABSTRACT.

	Mds.	Rs.				Rs. A. P.	A. P.
52	Private, including miscellaneous	1,000	4,800	5,728	210	3,327	37 15 9
17	Government stores, including ditto	2,000	100	5,658	230	3,234	30 2 0
69	Grand Total	3,000	5,140	11,386	479	6,561	73 1 9
27	Grand Total of same month last year	1,830	7,020	4,545	103	2,368	29 7 0

## MEMO.

Unrecovered balance on the 1st of the month  
Amount to tollage for the month

Total

Amount credited in the accounts for the month

Balance at the end of the month

Rs. A. P.

157 1 0

73 1 0

210 4 0

157 3 0

174 1 0

## SOUTH-WESTERN CIRCLE.

## Midnapore Canal.

LENGTH OF CANAL OPEN—58 MILES.

## LOCAL TRAFFIC.

(1)—PRIVATE.

Number of boats.	Nature of Cargo.	APPROXIMATE		TONNAGE OF BOATS.		Ton-miles.	Tollage.	Rate of toll per ton-mile.
		Weight of cargo.	Value of cargo.	Mounds.	Tons.			
	ARTICLES OF FOOD.	Mds.	Rs.				Rs. A. P.	A. P.
480	Paddy	88,885	58,179	1,81,305			2,689 2 9	
508	Rice	1,42,885	2,00,410	2,00,410			2,445 4 8	
13	Wheat	700	3,375	2,700			16 8 0	
110	Gram	18,100	20,185	41,280			380 11 8	
110	Fruits and vegetables	1,005	1,303	2,300			31 0 0	
43	Sugar, unrefined	4,175	21,004	10,765			138 13 0	
73	Salt	22,450	61,061	47,070			434 13 0	
4	Oil	1,300	5,404	2,325			23 14 8	
10	Fish	103	1,117	1,450			5 3 0	
1	Beetle nuts	150	2,350	850			3 1 0	
51	Beetle leaves	2,045	13,889	3,300			40 4 8	
18	Curd	1,445	8,047	3,300			41 9 6	
22	Coconuts (83,000 in number)	125	1,785	4,375			58 14 3	
3	Onion	800	325	775			20 2 0	
	STIMULANTS.							
10	Tobacco	2,375	12,854	5,905			71 11 3	
	CLOTHING.							
9	Cotton piece-goods (Indian)	440	35,500	1,325			30 7 6	
13	Do. ditto (European)	1,305	1,30,500	3,425			57 10 0	
	STAPLES OF MANUFACTURE.							
33	Brass	5,780	2,05,850	17,770			160 7 0	
7	Iron	834	3,893	1,970			24 2 9	
4	Silk	45	31,070	700			3 15 0	
8	Cotton	20	1,380	775			12 11 8	
44	Do. twist and yarn (European)	7,410	2,23,100	18,125			146 0 8	
31	Jute	4,380	17,040	10,285			47 13 8	
16	Hides (8,000 in number)	1,125	12,075	3,100			40 7 8	
1	Horns	100	800	250			2 3 0	
24	Mustard seed	6,300	24,700	13,725			83 12 0	
	BUILDING MATERIALS.							
5	Tiles (5,000 in number)	500	124	1,920			12 6 0	
8	Lime	575	172	1,105			7 4 0	
20	Sand	11,350	1,190	20,225			75 9 4	
3	Shrinker	200	120	450			1 10 0	
212	Unwrought timber and piles (10,628 in number)	54,124	60,550	46,480			761 7 0	
9	Bamboo (1,360 in number)	107	88	275			4 14 8	
	LIVE STOCK.							
2	Bullock, oxen and cow (3 in number)	3	50	340			1 2 9	
1	Sheep and goat (14 ditto)	1	25	100			1 2 4	
	FUEL.							
24	Coal and coke	6,700	1,738	18,800			70 0 0	
16	Charcoal	4,000	3,000	10,125			115 14 0	
11	Firewood	1,145	859	3,025			14 11 8	
	COOKING UTENSILS AND OTHER DOMESTIC IMPLEMENTS.							
38	Earthenware and earthen pots	4,822	964	10,005			62 4 0	
1	Stove plates	30	30	100			3 0 0	
	MISCELLANEOUS.							
205	Passenger boat			64,000			404 4 0	
1,477	Empty do.			1,07,000			1,080 4 0	
47	Sisal (1,517 bales)	10,400	4,803	37,250			140 11 8	
17	Oil-rake	4,805	2,805	6,815			23 12 0	
10	Furniture	620	800	1,525			15 0 0	
1	Mats	100	100	225			0 10 0	
3	Cumy (40 in number)	120	750	800			1 13 0	
32	Miscellaneous	4,050	3,262	13,055			68 13 3	
29	Other oils	4,050	10,102	9,775			124 8 0	
5	Salt	700	1,097	1,650			28 5 0	
3	Other saline substances	95	80	375			3 0 0	
	Demurrage						91 3 0	
4,480	Total	8,01,000	13,77,076	10,70,984	53,226	7,23,545	17,110 15 9	0 5 0
2,247	Total of same month last year	3,47,007	12,29,393	9,93,094	55,528	5,00,025	9,961 10 9	0 8 0

## Midnapore Canal—concluded.

Number of boats.	Nature of Cargo.	APPROXIMATE		TONNAGE OF BOATS		Tonnage.	Rate of toll per ton-mile.
		Weight of cargo.	Value of cargo.	Mounds.	Tons.		

## (2)—STORES AND MATERIALS FOR IRRIGATION WORKS.

	Nil						
	Total						
	Total of same month last year						

## ABSTRACT.

	Mos.	Rs.				Rs. A. P.
4,490 Private, including miscellaneous ...	3,31,639	15,77,075	10,70,334	55,226	723,683	11,110 10 3
Government stores, including oil to ...						
4,480 Grand Total	3,31,639	15,77,075	10,70,334	55,226	723,683	11,110 10 3*
5,237 Grand Total of same month last year	3,47,567	12,20,302	9,93,001	35,635	591,023	9,060 10 9

	Memo.	Rs. A. P.
Unrecovered balance on the 1st of the month		1,705 13 2
Amount of tollage for the month		11,110 15 9
	Total	12,815 12 4
Amount credited in the accounts for the month		11,375 0 0
Balance at the end of the month		1,440 12 4

\* This includes tolls on the Narsinghar channel amounting to Rs. 228-2-3.

## Hidgellie Tidal Canal.

LENGTH OF CANAL OPEN—29 MILES.

## LOCAL TRAFFIC.

## (1)—PRIVATE.

	ARTICLES OF FOOD.	Mds.	Rs.			Rs. A. P.	A. P.
462 Paddy	77,433	80,157	1,02,026			1,914 4 0	
107 Rice	17,100	24,132	37,136			318 12 0	
17 Fruits and vegetables	500	2,182	2,515			24 0 0	
5 Jaggery	200	1,450	2,125			54 0 0	
2 Sugar	40	100	200			1 0 0	
37 Salt	3,215	20,368	17,800			181 3 0	
20 Oil	800	9,000	3,350			31 15 0	
	STIMULANT.						
54 Tobacco	3,543	21,192	11,305			165 13 0	
	CLOTHING.						
19 Cotton piece-goods (European)	1,270	31,375	4,080			60 11 0	
	STAPLES OF MANUFACTURE.						
1 Bricks	10	500	50			0 0 0	
1 Iron	20	200	150			3 11 0	
1 Cotton	20	100	175			1 3 3	
0 Jute	350	1,020	835			11 1 3	
2 Hides	275	1,550	600			0 0 0	
	BUILDING MATERIALS.						
2 Bricks	715	132	2,050			14 1 0	
1 Tiles	200	40	600			10 15 0	
9 Shouting lime	510	2,150	1,300			8 15 0	
4 Sand	020	35	1,315			8 10 5	
19 Unwrought timber and poles	3,000	2,110	1,210			71 3 0	
1 Bamboo	10	5	10			0 11 0	
	FUEL.						
3 Coal and coke	700	175	1,575			10 0 0	
6 Firewood	390	132	250			0 2 0	
	COOKING UTENSILS AND OTHER DOMESTIC IMPLEMENTS.						
7 Earthenware and earthen pots	410	200	1,140			10 15 0	
2 Stone plates	160	300	475			3 4 3	
	MISCELLANEOUS.						
80 Passenger boat			4,425			71 9 3	
5 Empty do.			5,255			421 15 0	
60 Saw	17,325	10,000	40,100			270 1 0	
13 Mats	1,200	4,000	3,000			38 0 0	
10 Miscellaneous	411	1,200	1,435			12 3 0	
1 Gunny bags	100	400	225			5 1 3	
1,515 Total	1,36,965	2,36,810	3,68,250	12,703	209,603	3,708 13 0	0 3 3
1,515 Total of same month last year	1,62,720	3,04,375	4,05,290	14,474	237,131	4,078 12 0	0 0 4

## Hidgell's Tidal Canal—concluded.

Number of boats.	Nature of Cargo.	APPROXIMATE		TONNAGE OF BOATS.		Ton-unileams.	Tollage.	Rate of toll per ton-unileam.
		Weight of cargo.	Value of cargo.	Mounds.	Tons.			
(2)—STORES AND MATERIALS FOR IRRIGATION WORKS.								
		Mds.	Rs.				Rs. A. P.	A. P.
Nil								
	Total							
	Total of same month last year							

## ABSTRACT.

		Mds.	Rs.				Rs. A. P.	A. P.
1,515	Private, including miscellaneous	1,36,898	2,30,649	5,59,220	12,703	209,603	3,703 12 0	
	Government stores, including ditto							
1,515	Grand Total	1,36,898	2,30,649	5,59,220	12,703	209,603	3,703 12 0	
1,813	Grand total of same month last year	1,02,720	3,04,373	4,05,290	14,474	227,181	4,079 12 0	

## MEMO.

		Rs. A. P.
Unrecovered balance on the 1st of the month		1,402 0 6
Amounts of tolls for the month		3,703 12 0
	Total	5,105 12 6
Amount credited in the accounts for the month		4,438 14 0
Balance at the end of the month		666 18 6

## SONE CIRCLE.

## Eastern Main and Patna Canals.

LENGTH OF CANAL OPEN—86½ miles.

## LOCAL TRAFFIC.

## (1)—PRIVATE.

ARTICLES OF FOOD.		Mds.	Rs.				Rs. A. P.	A. P.
2	Rice	15	40	50	12	35	0 0 3	
1	Wheat	80	120	40	21	84	0 14 3	
1	Gram	143	250	321	112	331	2 7 0	
1	Fruits and vegetables	300	500	348	141	804½	8 13 9	
2	Asparagus	350	520	603	254	406½	5 1 8	
8	Salt	1,105	4,981	2,801	821	0,443	09 14 0	
1	Onion	80	1,300	120	4	253	3 2 0	
STIMULANT.								
1	Tobacco	100	400	297	10½	683	6 7 3	
STAPLES OF MANUFACTURE.								
	Tin	200	3,000	442	13½	845	1 0 6*	
1	Cotton						9 13 4	
2	Indes	555	4,150	1,002	37	2,279	24 10 0	
20	Linseed	4,775	14,800	8,309	20½	10,001	200 6 7	
BUILDING MATERIALS.								
4	Stone lime	750	100	1,423	60	2,601	25 15 0	
1	Kunkur			214	7½	113	0 10 0	
	Unbought timber and piles (83 timbers)						6 3 0	
24	Flour			200	13	200	2 11 3	
	Bamboo (2½ in number)						0 4 3	
	Bamboo (220,300 in number)						266 12 9	
FUEL.								
	Firewood (4,335 No.)						21 4 3	
COOKING UTENSILS AND OTHER DOMESTIC IMPLEMENTS.								
2	Earthenware and earthen pots	60	14	370	17½	270½	2 13 0	
MISCELLANEOUS.								
1	Sugarcane rills	100	1,000	210	7½	34½	0 0 0	
4	Passenger boat			299	14½	734	7 0 3	
11	Empty do.			0,550	100½	6,367½	34 0 3	
1	Woolen toys	175	200	308	8½	494	5 4 3	
47	Miscellaneous goods	0,725	24,390	12,300	497½	27,740½	280 13 6	
178	Total	10,370	55,857	36,820	1,218½	69,844½	1,000 1 0	0 3 0
308	Total of same month last year	13,809	1,80,721	1,18,648	4,190½	280,221½	2,523 4 0	0 1 7

\* Omitted to be charged in April's return.



*Eastern Main and Patna Canals—concluded.*

Number of boats.	Nature of Cargo.	APPROXIMATE		TONNAGE OF BOATS.		Ton-mileage.	Tollage.	Rate of toll per ton-mile.
		Weight of cargo.	Value of cargo.	Maunder.	Tons.			

(2)—STORES AND MATERIALS FOR IRRIGATION WORKS.

	BUILDING MATERIALS.	Mds.	Rs.				Rs. A. P.	A. P.
1	Head metal ... ..	150	35	262	04	462	0 3 0	.....
1	Sai planks ... ..	24	60	211	71	475	4 11 0	.....
1	Timber ... ..	60	40	217	81	136	1 10 0	.....
	MISCELLANEOUS.							
2	Empty boats ... ..	.....	.....	245	61	175	0 15 0	.....
5	Total ... ..	230	135	936	34	832	7 7 9	0 17
21	Total of same month last year ...	3,060	810	6,230	222	13,800	78 12 3	0 10

ABSTRACT.

		Mds.	Rs.				Rs. A. P.	
176	Private, including miscellaneous ... ..	15,370	53,527	85,850	1,248	00,841	1,090 1 9	.....
5	Government stores, including ditto ...	230	135	936	34	832	7 7 9	.....
183	Grand Total ... ..	15,600	53,662	86,786	1,282	70,673	1,100 9 8	.....
410	Grand total of same month last year ...	88,556	1,81,321	1,22,878	4,418	283,111	2,602 2 3	.....

MEMO.

	MEMO.	Rs. A. P.
Unrecovered balance on the 1st of the month ... ..	.....	507 12 6
Amount of tollage for the month ... ..	.....	1,100 9 8
	Total ... ..	1,614 8 6
Amount credited in the accounts for the month ... ..	.....	1,283 14 0
Balance at the end of the month ... ..	.....	330 8 0

*Western Main Canal.*

LENGTH OF CANAL OPEN—22 MILES.

LOCAL TRAFFIC.

(1)—PRIVATE.

	ARTICLES OF FOOD.	Mds.	Rs.				Rs. A. P.	A. P.
2	Spices (sacrah) ... ..	750	15,040	1,250	44	900	7 12 6	.....
	STAPLES OF MANUFACTURE.							
1	Hides (skin) ... ..	210	400	450	15	180	2 12 0	.....
7	Linseed ... ..	8,830	14,120	4,725	183	3,090	20 8 6	.....
1	Mustard seed ... ..	600	2,400	725	20	1,520	4 8 6	.....
	COOKING UTENSILS AND OTHER DOMESTIC IMPLEMENTS							
11	Grind-mill stone ... ..	4,893	2,416	6,175	290	5,840	44 12 0	.....
	MISCELLANEOUS.							
5	Empty boat ... ..	.....	.....	275	9	201	1 1 6	.....
...	Excess toll ... ..	.....	.....	.....	.....	.....	8 1 0	.....
27	Total ... ..	10,023	24,836	13,600	483	11,080	93 10 2	0 15
28	Total of same month last year ...	8,008	10,048	13,025	403	6,071	72 15 0	0 25

## Western Main Canal—concluded.

Number of boats.	Nature of Cargo.	APPROXIMATE		TONNAGE OF BOATS.		Tonnage.	Tollage.	Rate of toll per ton-mile.
		Weight of cargo.	Value of cargo.	Maunds.	Tons.			

## (3)—STORES AND MATERIALS FOR IRRIGATION WORKS.

	BUILDING MATERIALS.	Mds.	Rs.				Rs. A. P.	
9	Building stone (milo stone) ...	600	40	1,800	40	1,704	11 5	...
2	Total ...	600	40	1,800	40	1,704	11 5 0	0 1 1
4	Total of same month last year ...	1,000	60	1,700	60	846	5 5 0	0 1 2

## ABSTRACT.

		Mds.	Rs.				Rs. A. P.	
27	Private, including miscellaneous ...	10,023	24,336	13,600	483	11,683	98 10 8	...
9	Government stores, including ditto ...	800	40	1,800	46	1,794	11 2 9	...
26	Grand Total ...	10,823	24,376	14,800	529	13,479	104 13 0	...
32	Grand total of same month last year ...	2,006	16,185	14,725	528	6,607	81 4 0	...

## MEMO.

						Rs. A. P.	
	Unrecovered balance on the 1st of the month ...	...	...	...	...	163 14 6	
	Amount of tollage for the month ...	...	...	...	...	104 13 0	
					Total	268 11 6	
	Amount credited in the accounts for the month ...	...	...	...	...	164 6 6	
	Balance at the end of the month ...	...	...	...	...	74 5 0	

## Arrah Canal.

LENGTH OF CANAL OPEN—65 MILES.

## LOCAL TRAFFIC.

## (1)—PRIVATE.

	ARTICLES OF FOOD.	Mds.	Rs.				Rs. A. P.	A. P.
24	Pulses and other crops ...	3,516	6,032	4,310	154	3,062	44 5 0	...
13	Fruits and vegetables ...	170	2,303	1,164	41	372	4 13 0	...
1	Jaggery ...	25	169	131	4	108	1 12 3	...
10	Sugar ...	3,783	27,680	8,563	126	4,172	52 0 6	...
23	Salt ...	7,002	31,278	8,817	314	17,463	161 6 8	...
7	Spices ...	1,478	14,760	2,001	71	4,188	36 0 8	...
	STIMULANTS.							
1	Tobacco ...	90	960	171	6	330	1 3 6	...
	CLOTHING.							
1	Cotton piece-goods (Indian) ...	65	2,560	213	7	280	3 8 3	...
	STAPLES OF MANUFACTURE.							
3	Tin ...	38	275	83	4	136	1 4 0	...
1	India ...	375	7,520	451	16	1,120	7 0 6	...
1	Indigo ...	115	2,160	288	8	256	3 8 8	...
13	Linseed ...	3,384	10,014	3,313	128	14,794	102 1 9	...
1	Mustard-seed ...	651	1,951	939	26	1,520	11 8 6	...
	BUILDING MATERIALS.							
7	Building stones ...	2,472	231	3,172	113	7,088	53 0 3	...
8	Stone lime ...	565	865	500	21	792	8 6 0	...
8	Kankar ...	2,983	290	3,673	138	1,600	7 10 0	...
	Bullahs } 2,095 in number						2 10 0	...
	Bamboo ...							...
	FUEL.							
1	Coal and coke ...	355	173	604	18	300	1 10 0	...
3	Firewood ...	843	180	707	27	320	5 5 0	...
	MISCELLANEOUS.							
6	Passenger boat ...			2,762	98	2,026	21 8 0	...
22	Empty do. ...			7,042	251	4,014	23 1 0	...
1	Straw ...	10	5	30	1	16	0 3 0	...
11	Furniture ...	641	2,192	1,605	50	1,818	14 3 3	...
200	Total ...	28,501	1,00,251	48,463	1,717	87,100	537 13 6	0 1 5
354	Total of same month last year ...	22,213	85,147	60,803	1,610	61,805	499 14 8	0 1 8

Arrak Canal—concluded.

Number of boats.	Nature of Cargo.	APPROXIMATE		TONNAGE OF BOATS.		Ton. #1 millage.	Tollage.	Rate per toll per ton-mile.
		Weight of cargo.	Value of cargo.	Mahnds.	Tons.			
(2) STORES AND MATERIALS FOR IRRIGATION WORKS.								
	BUILDING MATERIALS.	Mds.	Rs.				Rs. A. P.	A. P.
1	Building stone	375	937	450	16	928	4 18 8	.....
	MISCELLANEOUS.							
2	Empty boats	.....	.....	350	18	456	3 10 8	.....
1	Stores, &c.	117	294	192	6	420	3 18 8	.....
4	Total	492	1,231	642	24	1,824	11 6 8	0 1-2
11	Total of same month last year	2,561	7,888	4,268	148	5,074	46 8 8	0 1-2

ABSTRACT.

		Mds.	Rs.				Rs. A. P.	
300	Private, including miscellaneous	25,861	1,06,251	48,445	1,717	67,190	537 13 8	.....
4	Government stores, including ditto	492	1,231	992	34	1,824	21 6 8	.....
304	Grand Total	26,353	1,07,482	49,437	1,751	69,014	558 4 0	.....
243	Grand total of same month last year	24,078	92,735	55,163	1,038	80,372	740 6 9	.....

MEMO.

		Rs. A. P.
Unrecovered balance on the 1st of the month	.....	248 8 0
Amount of tollage for the month	.....	540 4 0
	Total	789 12 0
Amount credited in the accounts for the month	.....	598 11 8
Balance at the end of the month	.....	190 0 8

Buxar Canal.

LENGTH OF CANAL OPEN—45 MILES.

LOCAL TRAFFIC.

(1)—PRIVATE.

	ARTICLES OF FOOD.	Mds.	Rs.				Rs. A. P.	Rs. A.
1	Gram	300	700	425	15	800	10 1 0	.....
2	Malt	1,000	2,812	1,675	50	2,640	30 12 0	.....
	STIMULANTS.							
1	Tobacco	125	500	200	7	112	1 8 0	.....
	STAPLES OF MANUFACTURE.							
5	Limeed	1,375	4,985	1,580	55	1,120	28 11 8	.....
3	Mowah	250	250	450	16	720	2 10 8	.....
	BUILDING MATERIALS.							
...	Bullahs 88, chowdhars 31, bamboo 33,200 in number.	.....	.....	.....	.....	.....	25 18 0	.....
	FUEL.							
7	Firewood	7,200	2,432	9,125	320	20,848	57 12 8	.....
	COOKING UTENSILS AND OTHER DOMESTIC IMPLEMENTS.							
13	Stone-mills	4,824	500	5,607	262	12,534	63 4 2	.....
	MISCELLANEOUS.							
11	Empty boats	85	100	1,025	85	654	5 14 0	.....
1	Ditto cooias	.....	.....	75	2	108	1 0 8	.....
...	Excess tollage	.....	.....	.....	.....	.....	2 1 0	.....
43	Total	14,957	16,508	20,091	718	40,816	203 8 2	0 0-8
26	Total of same month last year	4,770	12,558	7,027	240	12,148	198 1 0	0 3-4

## Buzar Canal—concluded.

Number of boats.	Nature of Cargo.	APPROXIMATE		TONNAGE OF BOATS.		Ton-mileage.	Tollage.	Rate of toll per ton-mile.
		Weight of cargo.	Value of cargo.	Hawds.	Tons.			

## (2)—STORES AND MATERIALS FOR IRRIGATION WORKS.

	MISCELLANEOUS.	Mds.	Rs.				Rs. A. P.	A. P.
1	Empty boats	175	0	324	1	12	0	0 10 0
1	Total	175	0	324	1	12	0	0 10 0
1	Total of same month last year	300	10	580	0	0	0	0 11 1

## ABSTRACT.

		Mds.	Rs.				Rs. A. P.	
48	Private, including miscellaneous	14,957	10,808	20,062	715	40,516	203 3 0	10 000
1	Government stores, including ditto	175	0	324	0	324	1 12 0	10 000
48	Grand Total	14,957	10,808	20,270	721	40,840	204 15 0	10 000
37	Grand total of same month last year	4,776	12,556	7,327	238	12,725	204 10 0	10 000

	Memo.	Rs. A. P.
Unrecovered balance on the 1st of the month	40 15 0	
Amount of tollage for the month	204 15 0	
Total	245 10 0	
Amount credited in the accounts for the month	207 11 0	
Add amount loss credited in September 1884	4 8 3	
Balance at the end of the month	33 11 0	

## ABSTRACT FOR THE MONTH OF OCTOBER 1884.

CANAL.	TRAFFIC, 1884-85.		TRAFFIC, 1883-84.		REMARKS.
	During the month.	To end of the month.	During the corresponding month.	To end of the corresponding month.	
ORISSA CIRCLE.					
Talanes	Rs. A. P. 224 11 11	Rs. A. P. 601 14 8	Rs. A. P. 320 12 11	Rs. A. P. 2,612 18 7	
Kendrapara	8,340 5 11	17,843 1 7	8,748 3 0	22,410 12 0	
High Level, Range 1	644 2 6	2,000 5 8	610 3 3	3,000 14 9	
Ditto, ditto 11	167 15 0	1,214 10 0	180 10 0	1,000 14 8	
Ditto, ditto 111	73 1 0	856 8 0	20 7 0	453 14 11	
Total Orissa Circle	4,378 8 1	22,505 9 1	4,789 4 2	30,787 5 0	
SOUTH-WESTERN CIRCLE.					
Midnapore	11,170 18 3	70,251 4 3	9,003 10 0	70,025 3 6	
Higgaice Tidal	3,703 12 9	29,701 12 0	4,078 12 0	41,905 11 0	
Total South-Western Circle	14,874 12 0	1,00,043 0 3	13,081 7 0	1,12,030 14 6	
SONS CIRCLE.					
Eastern Main and Patna	1,100 9 8	14,451 2 8	2,002 2 3	16,730 11 0	
Western Main	104 13 0	673 7 0	81 4 0	1,114 0 0	
Arrah	510 4 0	6,428 0 8	740 2 0	11,128 1 3	
Buzar	204 12 0	1,187 8 0	204 10 0	4,143 2 8	
Total Sone Circle	1,919 10 8	22,739 10 0	3,034 6 3	32,915 5 8	
GRAND TOTAL	21,166 14 4	1,43,775 4 1	22,400 0 11	1,70,163 0 6	

## GOVERNMENT TRANSPORT SERVICE.

CANAL.	TRAFFIC, 1884-85.						TRAFFIC, 1883-84.					
	During the month.			To end of the month.			During the corresponding month.			To end of the corresponding month.		
	Passengers.	Goods.	Total receipts.	Passengers.	Goods.	Total receipts.	Passengers.	Goods.	Total receipts.	Passengers.	Goods.	Total receipts.
<b>ORISSA CANAL.</b>	No.	Mds.	Rs. A. P.	No.	Mds.	Rs. A. P.	No.	Mds.	Rs. A. P.	No.	Mds.	Rs. A. P.
Taldunda and Kendrapara	1,210	1,180	1,541 0 0	7,420	9,810	10,589 10 11	2,705	...	4,983 4 2	11,312	2,487	19,358 7 0
High Level	...	...	...	4,306	9,011	4,905 8 4	777	1,107	537 2 2	5,017	6,111	4,160 0 0
Total Orissa Canal	1,210	1,180	1,541 0 0	11,626	17,821	15,495 3 3	3,502	1,107	5,520 0 4	14,329	8,598	23,518 7 0
<b>SOUTH-WESTERN CIRCLE.</b>												
Midnapore	10,316	960	750 0 0	99,105	5,528	5,250 0 0	10,559	254	1,000 0 0	78,014	2,587	7,046 0 0
Total South-Western Circle	10,316	960	750 0 0	99,105	5,528	5,250 0 0	10,559	254	1,000 0 0	78,014	2,587	7,046 0 0
<b>BONE CIRCLE.</b>												
Eastern Main and Patna	...	588	317 13 2	...	4,078	2,280 10 0	1,758	2,175	937 0 0	4,290	12,757	5,800 5 3
Western Main and Buzar	1,307	4,531	900 7 5	2,100	14,571	4,243 10 0	1,364	3,252	1,113 9 8	10,453	30,440	7,007 12 3
Arrah	1,429	1,332	908 0 0	6,008	7,544	5,742 9 0	2,045	1,041	1,752 0 0	12,478	13,014	11,079 0 0
Total Bone Circle	2,736	6,451	2,225 4 0	13,428	25,113	12,265 4 0	5,215	7,908	3,602 9 8	31,131	45,811	21,072 12 4
<b>GRAND TOTAL</b>	20,152	8,580	4,303 10 0	124,160	49,462	33,020 7 3	19,379	5,286	10,632 15 7	123,164	57,796	62,478 0 3

## TOTAL NAVIGATION RECEIPTS.

	EARNINGS, 1884-85.		EARNINGS, 1883-84.		REMARKS.
	During the month.	To end of the month.	During the corresponding month.	To end of the corresponding month.	
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	
Orissa Canal	5,717 14 1	38,484 12 4	10,002 10 6	54,293 6 3	
Midnapore Canal	11,800 13 5	75,501 4 3	10,965 10 9	77,855 3 8	
Hajiallee Tidal Canal	5,703 13 9	29,701 12 0	4,073 14 0	41,909 11 0	
Bone Canals	4,285 14 0	29,021 14 0	7,419 14 0	59,791 4 9	
<b>GRAND TOTAL</b>	25,510 1 10	1,75,706 11 4	32,069 0 0	2,23,841 5 3	

C. W. ODLING,

Under-Secy. to the Government of Bengal.

CALCUTTA,  
The 23rd December 1884.

## PUBLIC WORKS DEPARTMENT, IRRIGATION BRANCH, BENGAL.

Statement showing the total amount of Traffic and Tolls on the Circular Canal at the Chitpur Toll Station for the month of November 1884.

Number of boats.	NATURE OF CARGO.	APPROXIMATE		TONNAGE OF BOATS.		Tollage.		
		Weight of cargo.	Value of cargo.	Maunds.	Tons.	Rs. A. P.		
	<b>LOCAL TRAFFIC.</b>	<b>Mds.</b>	<b>Rs.</b>					
215	Coal ...	1,63,940	61,477	3,30,450	12,018	2,226	9	0
2	Roadstone ...	1,300	313	2,600	92	9	12	0
2	Bricks ...	18,000	180	2,800	100	10	8	0
18	Earthenware ...	1,200	600	6,500	232	24	14	0
16	Sand ...	6,550	1,965	15,275	545	68	8	6
5	Iron ...	1,670	10,020	4,050	144	35	7	0
1	Cotton ...	8	120	550	19	4	13	0
6	Jute ...	2,560	7,680	5,225	186	19	9	6
5	Mats ...	500	280	1,225	43	11	11	6
6	Paddy ...	2,450	3,675	5,525	197	48	5	6
1	Rice ...	150	525	300	10	1	2	0
1	Wheat ...	175	612	1,100	39	9	10	0
1	Gram ...	60	150	525	18	4	9	8
2	Tobacco ...	300	2,400	625	22	5	7	6
524	Salt ...	2,37,097	6,42,742	5,19,200	18,542	4,381	4	0
13	Bones ...	1,650	1,650	4,400	157	28	2	0
<b>818</b>	<b>Total ...</b>	<b>4,37,610</b>	<b>7,34,389</b>	<b>9,06,350</b>	<b>32,362</b>	<b>6,890</b>	<b>5</b>	<b>0</b>
<b>884</b>	<b>Total of same month last year.</b>	<b>4,23,050</b>	<b>6,99,225</b>	<b>9,35,525</b>	<b>33,412</b>	<b>7,193</b>	<b>11</b>	<b>6</b>
	<b>MISCELLANEOUS.</b>							
950	Empty, passenger, planks, golepatta, charcoal, fowls, &c.	10,925	43,700	6,08,700	21,739	3,176	12	6
210	Boats under 25 maunds	.....	.....	.....	.....	52	8	0
.....	Demurrage	.....	.....	.....	.....	60	0	9
<b>1,160</b>	<b>Total ...</b>	<b>10,925</b>	<b>43,700</b>	<b>6,08,700</b>	<b>21,739</b>	<b>3,289</b>	<b>5</b>	<b>3</b>
<b>1,250</b>	<b>Total of same month last year.</b>	<b>1,02,400</b>	<b>51,000</b>	<b>3,55,200</b>	<b>12,685</b>	<b>2,683</b>	<b>8</b>	<b>3</b>
<b>1,978</b>	<b>Grand Total ...</b>	<b>4,48,535</b>	<b>7,78,089</b>	<b>15,15,050</b>	<b>54,101</b>	<b>10,179</b>	<b>10</b>	<b>3</b>
<b>2,134</b>	<b>Grand total of same month last year.</b>	<b>5,25,450</b>	<b>7,50,225</b>	<b>12,90,725</b>	<b>46,097</b>	<b>9,877</b>	<b>3</b>	<b>9</b>

## MEMORANDUM.

Rs. A. P.

Unrecovered balance on the 1st of the month	...	...	4 02 10 0
Amount of tollage for the month	...	...	10,179 10 3
<b>Total</b>	...	...	<b>10,583 4 3</b>
Amount credited in the accounts for the month	...	...	9,895 0 0
<b>Balance at the end of the month</b>	...	...	<b>1,187 4 3</b>



## PUBLIC WORKS DEPARTMENT, IRRIGATION BRANCH, BENGAL.

Statement showing the total amount of Traffic and Tolls on the Circular Canal at the Dhappa Toll Station for the month of November 1884.

Number of boats.	NATURE OF CARGO.	APPROXIMATE		TONNAGE OF BOATS.		Tollage.
		Weight of cargo.	Value of cargo.	Maunds.	Tons.	
	LOCAL TRAFFIC.	Mds.	Rs.			Rs. A. P.
9	Earthenware ...	400	200	1,150	41	10 1 0
49	Lime ...	55,247	42,304	1,07,400	3,835	939 12 0
431	Firewood ...	2,33,400	35,010	4,10,075	14,646	3,374 1 0
14	Iron ...	808	4,848	3,275	117	28 10 6
3	Brass ...	300	9,000	3,950	141	18 4 3
3	Cotton ...	1,700	25,500	4,500	160	39 6 0
1,333	Jute ...	9,92,741	29,78,223	19,60,925	70,033	17,162 13 6
47	Mats ...	7,250	10,785	22,825	815	109 11 6
5	Paddy ...	1,075	1,612	2,150	76	19 11 0
316	Rice ...	1,33,862	4,68,517	2,45,375	8,763	2,412 13 0
27	Gram ...	12,180	30,450	28,275	1,009	244 4 0
2	Linseed ...	780	2,730	1,575	56	13 12 6
41	Mustard-seed ...	24,858	99,432	49,800	1,778	432 14 6
188	Other oils ...	42,385	1,69,540	1,12,750	4,026	493 4 6
58	Oil-cake ...	19,900	19,900	43,025	1,536	376 7 6
77	Fruits ...	14,475	57,900	29,375	1,049	257 0 6
114	Vegetables ...	18,379	45,947	37,450	1,337	327 11 0
4	Tobacco ...	580	4,640	1,100	39	6 12 6
2	Spices ...	492	3,936	1,050	37	9 3 0
3	Cocoanut ...	3,91,000	9,775	3,203	114	28 0 0
28	Grass for cattle ...	454	2,216	2,875	102	72 6 6
27	Straw ...	516	2,580	9,450	337	82 11 0
34	Betelnuts ...	7,770	77,700	16,975	606	148 8 6
8	Sugar, unrefined ...	1,340	11,720	2,950	105	25 13 0
81	Jaggery ...	18,580	55,740	34,350	1,226	300 9 0
58	Salt ...	4,749	11,872	15,000	535	65 10 0
12	Hides ...	3,417	6,834	1,050	37	9 3 0
30	Bones ...	4,835	4,835	10,350	369	90 9 0
24	Dry fish ...	400	4,000	2,550	91	22 5 0
3,028	Total ...	19,93,873	41,97,746	31,64,775	1,13,015	27,212 4 9
3,769	Total of same month last year.	16,50,235	49,17,720	33,89,975	1,21,072	27,926 8 9
	MISCELLANEOUS.					
3,482	Empty, passenger, fish, golepattu, planks, tamarind, onion, charcoal, fowls, shells, canes, &c.	1,17,200	4,68,800	4,90,550	17,519	4,292 5 9
455	Boats under 25 maunds	.....	.....	.....	.....	113 12 0
.....	Demurrage	.....	.....	.....	.....	683 15 6
3,837	Total ...	1,17,200	4,68,800	4,90,550	17,519	5,090 1 3
5,102	Total of same month last year.	2,41,000	10,23,000	6,13,675	21,916	6,688 7 0
6,965	Grand Total ...	21,11,073	46,66,546	36,55,325	1,30,534	32,302 6 0
8,871	Grand total of same month last year.	18,91,236	59,40,720	40,03,650	1,42,988	34,614 15 9

## MEMORANDUM.

	Rs. A. P.
Unrecovered balance on the 1st of the month	1,081 10 0
Amount of tollage for the month	32,302 6 0
Total	33,384 0 0
Amount credited on the accounts for the month	30,965 1 0
Balance at the end of the month	2,418 15 0

## PUBLIC WORKS DEPARTMENT, IRRIGATION BRANCH, BENGAL.

Statement showing the total amount of Traffic and Tolls on the Tolly's Nallah for the month of November 1884.

Number of boats.	NATURE OF CARGO.	APPROXIMATE		TONNAGE OF BOATS.		Tollage.
		Weight of cargo.	Value of cargo.	Maunds.	Tons.	
	LOCAL TRAFFIC.	Mds.	Rs.			Rs. A. P.
83	Coal ...	33,027	12,385	70,375	2,512	321 8 0
39	Roadstone ...	23,200	5,568	49,650	1,773	186 3 0
205	Bricks ...	5,52,500	5,525	1,10,675	3,952	416 8 6
22	Tiles ...	24,400	732	11,625	414	46 2 8
107	Earthenware ...	1,190	730	20,375	727	94 10 0
31	Sand ...	14,950	4,485	36,025	1,286	135 1 6
3	Lime ...	55	45	75	2	0 12 0
152	Firewood ...	36,910	9,227	79,150	2,820	592 3 3
10	Iron ...	3,000	18,000	7,175	256	38 2 6
9	Cotton ...	1,661	24,915	2,750	96	24 3 0
7	Jute ...	1,501	4,503	3,250	115	28 7 6
76	Mats ...	7,800	10,218	39,000	1,070	254 6 6
298	Paddy ...	33,243	49,864	90,875	3,244	628 3 6
996	Rice ...	91,374	3,19,808	1,82,725	6,529	1,141 7 6
25	Gram ...	3,056	7,640	6,525	232	55 9 9
30	Mustard seed ...	14,165	56,660	30,150	1,076	237 15 0
39	Other oils ...	5,519	22,076	14,600	621	64 6 9
2	Oil-cake ...	17	17	125	4	11 0 0
1	Fruits ...	100	400	275	9	1 0 6
26	Vegetables ...	2,432	6,079	7,925	282	31 3 0
20	Tobacco ...	3,235	25,880	8,800	313	46 1 0
2	Spices ...	165	1,320	500	16	4 6 6
10	Cocoanut ...	3,500	105	250	8	2 8 0
1	Grass for cattle ...	5	20	150	5	1 5 0
443	Straw ...	2,876	14,380	51,400	1,799	363 6 0
1	Betelnuts ...	550	5,500	1,100	39	9 10 0
4	Sugar, unrefined ...	335	2,680	700	24	6 2 6
99	Jaggery ...	15,312	45,936	33,400	1,192	292 8 0
114	Salt ...	34,830	87,074	33,575	2,984	578 2 0
10	Cattle ...	786	1,572	850	29	7 8 6
2	Hides ...	2,400	4,800	750	26	6 9 0
1	Dry fish ...	10	100	300	10	1 2 0
2,868	Total ...	9,14,104	7,48,244	9,36,100	33,305	5,632 6 9
4,487	Total of same month last year.	6,06,507	11,77,100	10,98,075	39,205	7,914 7 6
	MISCELLANEOUS.					
3,932	Empty, passenger, planks, cheerah, soor-keo, fish, betel, gale-pata, bamboos, char-coals, shells, &c.	49,310	1,97,240	5,49,725	19,632	3,402 4 3
182	Boats under 25 maunds	.....	.....	.....	.....	45 8 0
.....	Demurrage ...	.....	.....	.....	.....	181 0 6
4,114	Total ...	49,310	1,97,240	5,49,725	19,632	3,628 12 9
4,119	Total of same month last year.	76,338	1,58,010	2,34,834	8,391	4,177 5 9
6,982	Grand Total ...	9,63,414	9,45,484	14,85,825	52,937	9,261 3 6
8,606	Grand total of same month last year.	6,82,846	13,35,110	13,32,909	47,596	12,001 13 3

## MEMORANDUM.

	Rs. A. P.
Unrecovered balance on the 1st of the month	334 15 6
Amount of tollage for the month	9,261 3 6
Total	9,595 3 0
Amount credited in the accounts for the month	8,870 13 3
Balance at the end of the month	725 5 9

## ABSTRACT FOR THE MONTH OF NOVEMBER 1884.

	TRAFFIC, 1884-85.		TRAFFIC, 1883-84.	
	During the month.	To end of the month.	During the corresponding month.	To end of the corresponding month.
<b>CIRCULAR CANAL.</b>	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
Circular Canal at Chitpore toll-station ...	10,179 10 3	54,459 7 3	9,877 3 9	50,553 1 0
Ditto at Dhappa toll-station ...	32,302 6 0	1,56,961 9 9	34,614 15 9	1,75,951 11 9
<b>Total</b> ...	42,482 0 3	2,11,421 1 0	44,492 3 6	2,26,504 12 9
Tolly's Nullah ...	9,261 3 6	66,748 11 0	12,091 13 3	78,901 7 0
<b>GRAND TOTAL</b> ...	51,743 3 9	2,77,869 12 0	56,584 0 9	3,03,406 3 9

CALCUTTA,  
The 23rd December 1884.

C. W. ODLING,  
Under-Secretary to the Govt. of Bengal.

## Nalhati State Railway

Statement showing Increases and Decreases in maundage of Staples carried over the line during the month of October 1884, as compared with the corresponding period of November 1883.

STAPLES.	1883.		1884.		1883.	1884.	Increase.	Decrease.
	Up.	Down.	Up.	Down.	Total.	Total.		
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Brown bell-metal ware	...	...	...	...	...	...	...	...
Coal	144	4	541	5	144	541	397	...
Cotton	39	...	21	...	29	21	...	8
Edible grain	109	33	27	8	144	35	...	109
Piece-goods	43	...	59	...	43	59	16	...
Sugar and jaggery	3	...	6	...	3	6	3	...
Silk and silk cloth	...	15	...	9	...	10	...	7
Sundries	90	35	92	33	125	120	...	5
Revenue stores	...	10	...	4	...	30	...	20
Seeds of all sorts	...	18	...	2	...	13	...	11
Salt	28	...	57	...	28	57	29	...
<b>Total</b>	440	105	709	55	549	527	22	140

INCREASE.		Tons.
Coal	...	397
This increase is due to one of the coal merchants stacking up per sale.		...
Piece-goods	...	16
This increase is due to previous stock being entirely exhausted.		...
Revenue stores	...	20
This increase is due to revenue stores being carried by ordinary train instead of by ballast train.		...
DECREASE.		Tons.
Edible grain	...	109
This decrease is due to partial failure of paddy crops for want of early rain.		...

Nalhati, the 17th December 1884.

RUSSICKLAL ROY,  
Offg. Manager.

## TIRHOOT STATE RAILWAY.

Statement showing Increases and Decreases in Maundage of Principal Staples carried over the Line during the month of November 1884, as compared with the corresponding period of 1883.

STAPLES.	1884.		1883.		Total.		Increase.	Decrease.
	Up.	Down.	Up.	Down.	1884.	1883.		
	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.
Bamboo and bricks	7,253	17	3,837		7,233	3,837	3,716	
Coal and coke	1,472				1,489		1,489	
Cotton	25,539	129	17,377	151	25,668	17,528	8,140	
Piece-goods								
Indigo	1,300	20,339	1,655	11,129	20,533	11,129	9,203	
Gunny-bags	236	1,043		254	2,313	1,939	404	
Fruits	67,940	80	10,760		200		200	
Food-grains	27,215		25,777		25,036	43,837	49,519	
Hides and horns	109	5,517	103	8,141	9,624	8,204	1,362	
Lac	1,128				306		306	
Lime and kunkur	834		11,161	65	1,174	11,340		10,116
Liquors		114			532		532	
Metal—								
I.—Iron	8,851	3	3,067	30	8,853	2,183	5,475	
II.—Brass, bell-metal, and copperware	891	283			1,214		1,214	
Mowah	1,743				1,743		1,743	
Oil	908	20			928		928	
Onions	19	2,023			2,041		2,041	
Paints and colours	91				91		91	
Ghee	8	3,613	925		3,623	925	2,428	
Railway materials	31,096	18,075	31,943	8,310	20,681	71,257	20,681	20,681
Salt	60,230	270	38,005	4,273	50,492	43,738	16,757	
Saltpetre		28,141		34,073	28,141	34,073	28,141	28,141
Seeds	711	71,504	8,330	37,730	72,535	44,009	28,516	
Spices	558	4			560		560	
Sugar and jaggree	251	1,341			2,073		2,073	
Tobacco	343	7,591	2	10,064	7,593	12,063		2,182
Wood—								
I.—Timber	6,591	6,685			13,276		13,276	
II.—Firewood		30			30		30	
All other goods	13,118	12,322	17,365	22,219	25,440	30,004		14,164
Total	2,80,337	2,11,989	1,82,436	1,63,776	4,42,016	3,46,210	1,44,793	62,087
Net increase					8,49,210		52,987	
					65,806		93,806	

HORACE BELL,  
Manager.

A. W. U. POPE,  
Traffic Superintendent.

## GENERAL REMARKS AND EXPLANATIONS.

The total quantity of goods carried during the month of November 1884 aggregated maunds 4,42,016, as compared with the maund 3,46,210 carried during the corresponding period of 1883, and maunds 3,16,493 carried during the previous month, showing an increase of maunds 95,806 in one case and 1,25,523 in the other.

Of the several increases and decreases the following are the most prominent ones and worthy of separate explanations:—

## INCREASES.

	Mds.
Coal and coke	3,716
This is due to the establishment of a coal agency by Messrs. Stevens McNaughton & Co.	
Piece-goods	8,140
This fluctuates according to Hindu festivals and also according to the pecuniary prosperity of the district.	
Indigo	9,203
This is being despatched earlier this year than last.	
Food-grains	49,519
Due to threatened scarcity and failure of crops.	
Iron	5,475
Due to despatch of scrap iron to Barrakar from the Sonastipore stores.	
Ghee	2,428
This is worthy of notice and would be much larger if we could see one way to making special wagons, &c., for its transport.	
Salt	16,757
Due to reduction in East Indian Railway rates which drew the traffic to the Railway.	
Seeds	28,516
The rivers were low so the Railway had to be used. Also the failure of castor-oil seed crop elsewhere necessitated East Indian Railway making large purchases in Tirhoot for the Mannari Oil Factory.	
Timber	13,276
Messrs. Dear & Co. have a large depot at Sonastipore for this traffic, and it fluctuates according to the number of contracts they obtain for timbers wrought and unwrought.	

## DECREASES.

	Mds.
Lime and kunkur	10,116
This is due to small demands by the Road Cess and Durbhanga Raj. and depends entirely on such engineering projects.	
Railway materials	20,681
Due to the completion of the Eastern, Western and Hajipore extensions.	
Saltpetre	5,937
The price at Calcutta is low, and no demand exists in the market.	
Tobacco	2,182
The year's crops have been very poor.	

HORACE BELL,  
Manager.

A. W. U. POPE,  
Traffic Superintendent.

## Weekly Return of Traffic Receipts on Indian Railways.

## EAST INDIAN RAILWAY.

Approximate Return of Traffic for week ended 13th December 1884 on 1,509½ miles open.

	COACHING TRAFFIC.		MERCHANDISE AND MINERAL TRAFFIC.		Other earnings (estimated).	Total earnings.	TRAFFIC TRAIN-MILES RUN.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
Total traffic for the week	181,881	Rs. A. P. 2,33,818 10 0	Mds. n. 21,01,431 20	Rs. A. P. 6,07,675 1 6	Rs. A. P. 17,416 8 0	Rs. A. P. 8,58,910 8 6	65,001	64,853	129,854
Or per mile of railway	120 14 5			402 9 1	11 8 7	569 0 1			
For previous 23 weeks of half-year	4,803,333	84,55,150 2 4	4,59,00,109 4	1,78,80,522 1 9	2,78,039 5 11	1,61,04,357 11 0	1,420,185½	1,009,116½	2,429,302
Total for 24 weeks	4,785,233	84,88,964 12 4	4,61,60,833 20	1,11,93,197 8 8	2,97,115 13 11	1,71,49,207 14 6	1,401,190½	2,009,000½	3,410,191
COMPARISON.									
Total for corresponding week of previous year	192,199†	1,00,404 9 0	23,72,922 30	7,39,058 8 9	19,893 13 0	10,14,893 0 9	60,036	197,043	105,299
Per mile of railway corresponding week of previous year	127 0 10			489 2 0	13 13 7	673 0 8			
Total to corresponding date of previous year	4,707,055†	85,30,518 4 2	5,72,47,061 0	1,51,80,901 14 10	3,52,028 15 5	2,10,47,541 2 5	1,523,907	3,013,046	4,536,953

Approximate Statement of gross receipts of the East Indian Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.

RECEIPTS FOR WEEK ENDING 15TH DECEMBER 1883.			RECEIPTS FOR WEEK ENDING 15TH DECEMBER 1884.			TOTAL RECEIPTS FROM 1ST APRIL 1883 TO 15TH DECEMBER 1883.			TOTAL RECEIPTS FROM 1ST APRIL 1884 TO 15TH DECEMBER 1884.			Total increase in 1884.	Total decrease in 1884.
Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked.		
1,509	Rs. 10,14,084	Rs. 672	1,509½	Rs. 8,58,910	Rs. 569	1,509	Rs. 8,51,321 141	Rs. 23,302	1,509½	Rs. 2,87,70,636	Rs. 19,064	.....	Rs. 63,38,500

## EASTERN BENGAL STATE RAILWAY.

Approximate Return of Traffic for week ended 6th December 1884, on 359 miles open, including Calcutta and South-Eastern and Bengal Central Railway mileage.

	COACHING TRAFFIC.		MERCHANDISE AND MINERAL TRAFFIC.		Other earnings (estimated), including steam-boats.	Total earnings.	TRAFFIC TRAIN-MILES RUN.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
A.—Total traffic for the week	106,804	Rs. A. P. 29,602 0 0	Mds. n. 3,59,117 0	Rs. A. P. 71,705 0 0	Rs. A. P. 900 0 0	Rs. A. P. 1,31,507 0 0	11,061	19,031	30,092
Or per mile of railway	298	110 0 0	981 0	309 0 0	.....	310 0 0	.....	.....	.....
For previous 23 weeks of half-year	1,842,586	7,43,631 0 0	73,01,661 0	17,00,879 0 0	1,80,537 0 0	26,24,768 0 0	191,377	243,794	435,171
Total for 24 weeks	1,949,390	7,63,233 0 0	76,60,778 0	17,72,574 0 0	1,80,536 0 0	27,55,134 0 0	202,438	263,825	466,263
COMPARISON.									
B.—Total for corresponding week of previous year	69,576	34,321 0 0	* 2,22,576 0	45,800 0 0	8,418 0 0	63,180 0 0	2,890	7,298	17,113
Per mile of railway corresponding period of previous year	265	130 0 0	846 0	173 0 0	.....	303 0 0	.....	.....	.....
Total to corresponding date of previous year	1,754,393	8,17,080 0 0	63,81,750 0	15,54,079 0 0	2,32,083 0 0	24,04,733 0 0	223,506	186,451	411,755

A.—Includes receipts of Calcutta and South-Eastern Railway, and 50 per cent. of receipts of Bengal Central Railway, viz., Rs. 2,168 and Rs. 4,124 respectively apportioned over the several heads of traffic.

B.—Includes share of Bengal Central Railway receipts due to Eastern Bengal State Railway for working, viz., Rs. 872, and Calcutta and South-Eastern receipts Rs. 4,107.

## FINANCIAL YEAR.

Approximate Statement of gross receipts of the Eastern Bengal State Railway.

RECEIPTS FOR WEEK ENDING 3TH DECEMBER 1883.			RECEIPTS FOR WEEK ENDING 6TH DECEMBER 1884.			TOTAL RECEIPTS FROM 1ST APRIL 1883 TO 3TH DECEMBER 1883.			TOTAL RECEIPTS FROM 1ST APRIL 1884 TO 6TH DECEMBER 1884.			Total increase in 1884.	Total decrease in 1884.
Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked.		
363	Rs. 58,130	Rs. 230*	359*	Rs. 1,21,860	Rs. 339	343	Rs. 20,31,919	Rs. 14,044	337	Rs. 27,22,570	Rs. 11,261	Rs. 1,04,251	.....

\* Increase in mileage.

	Miles.
Eastern Bengal State Railway	5
Bengal Central Railway	91
Total	96

## BENGAL CENTRAL RAILWAY.

Approximate Return of Traffic for week ended 6th December 1884 on 126 Miles open.

	COACHING TRAFFIC.		MERCHANDISE AND MINERAL TRAFFIC.		Other earnings (estimated).	Total earnings.	TRAFFIC TRAIN-MILES RUN.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A. P.	Mds. S.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for the week ...	13,036	8,836 0 0	14,187 0	1,375 0 0	82 0 0	8,918 0 0	9,811	1,036	10,847
Or per mile of railway ...	143	84 0 0	113 0	11 0 0	.....	85 0 0	.....	.....	.....
For previous 23 weeks of half-year ...	329,476	1,66,444 0 0	2,59,827 0	23,062 0 0	1,037 0 0	1,76,563 0 0	71,423	23,027	94,450
Total for 23 weeks ...	407,458	1,63,298 0 0	2,83,714 0	23,441 0 0	1,060 0 0	1,87,702 0 0	75,234	24,993	1,00,227
COMPARISON.									
Total for corresponding week of previous year ...	9,751	1,551 0 0	4,224 0	161 0 0	38 0 0	1,765 0 0	907	831	1,738
Per mile of railway corresponding period of previous year ...	279	46 0 0	124 0	5 0 0	1 0 0	50 0 0	.....	.....	.....
Total to corresponding date of previous year ...	227,004	40,285 0 0	3,11,639 0	8,260 0 0	550 0 0	49,693 0 0	20,866	7,050	27,916

## FINANCIAL YEAR.

Approximate Statement of Gross Receipts of the Bengal Central Railway.

RECEIPTS FOR WEEK ENDING 6TH DECEMBER 1883.			RECEIPTS FOR WEEK ENDING 6TH DECEMBER 1884.			TOTAL RECEIPTS FROM 1ST APRIL 1883 TO 6TH DECEMBER 1883.			TOTAL RECEIPTS FROM 1ST APRIL 1884 TO 6TH DECEMBER 1884.			Total increase in 1884.	Total decrease in 1884.
Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked.		
	Rs.	Rs.		Rs.	Rs.		Rs.	Rs.		Rs.	Rs.	Rs.	Rs.
85	1,765	50	126	9,840	65	35	77,700	2,323	125	5,24,860	2,595	2,48,360	.....

## PATNA AND GYA STATE RAILWAY.

Approximate Return of Traffic for week ended 18th December 1884 on 57½ miles open.

	COACHING TRAFFIC.		MERCHANDISE AND MINERAL TRAFFIC.		Other earnings (estimated).	Total earnings.	TRAFFIC TRAIN-MILES RUN.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A. P.	Mds. S.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for the week ...	9,528	5,071 10 0	40,419 20	2,729 0 0	88 9 0	5,160 12 0	1,807	751	2,558
Or per mile of railway ...	168	92 2 5	811 20	48 16 2	1 0 4	140 1 11	.....	.....	.....
For previous 23 weeks of half-year ...	211,387*	1,79,752 5 11*	10,25,019 0	70,705 2 0*	1,897 0 6*	2,52,354 15 5	30,922½	23,405½	54,328
Total for 23 weeks ...	320,909	1,85,423 13 11	10,71,432 20	73,503 2 0	1,953 0 0	2,60,484 11 5	41,729½	23,207½	64,937
COMPARISON.									
Total for corresponding week of previous year ...	13,830½	6,549 13 4	33,457 0	2,507 9 0	64 8 0	6,621 14 4	1,624	835	2,459
Per mile of railway corresponding week of previous year ...	240	119 12 0	655 0	43 12 5	1 3 1	164 11 0	.....	.....	.....
Total to corresponding date of previous year ...	200,444½	1,41,123 14 10	8,27,222 30	67,905 12 0	1,781 9 0	2,00,751 5 10	43,842	10,723	54,565

\* Added number of passengers 46, Rs. 30-13-11 to Coaching, and deducted Rs. 86 from Merchandise, and Rs. 18½ from other earnings on account of the Supplemental Returns to quarter ended 30th September 1884.

Approximate Statement of gross receipts of the Patna and Gya State Railway, prepared in accordance with Public Works Department Circular No. X.X.I, Railway, dated 23rd July 1883.

RECEIPTS FOR WEEK ENDING 10TH DECEMBER 1883.			RECEIPTS FOR WEEK ENDING 13TH DECEMBER 1884.			TOTAL RECEIPTS FROM 1ST APRIL 1883 TO 15TH DECEMBER 1883.			TOTAL RECEIPTS FROM 1ST APRIL 1884 TO 15TH DECEMBER 1884.			Total increase in 1884.	Total decrease in 1884.
Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked.		
	Rs.	Rs.		Rs.	Rs.		Rs.	Rs.		Rs.	Rs.	Rs.	Rs.
57½	9,423	163	57½	8,630	149	57½	3,20,475	5,093	57½	3,74,881	6,506	53,906	.....



GHAZIPUR-DILDAKNAGAR STATE RAILWAY.

Approximate Return of Traffic for week ended 13th December 1884, on 12 miles open.

COACHING TRAFFIC.		MERCHANDISE AND MINERAL TRAFFIC.		Other earnings (estimated).	Total earnings.	TRAFFIC TRAIN-MILES RUN.			
Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.	
	Rs. A. P.	Mds. S.	Rs. A. P.	Rs. A. P.	Rs. A. P.				
1,830	327 6 0	39,852 10	701 0 0	20 6 0	2,054 11 0	136	143	279	
half-48,103*	4,772 14 0*	2,30,175 0*	6,448 11 0*	2 8 1	57 14 5	.....	.....	.....	
48,103*	4,772 14 0*	2,30,175 0*	6,448 11 0*	613 10 0*	12,035 4 0	4,948	2,854	7,772	
50,028	2,400 4 0	2,33,027 10	6,349 11 0	630 16 0	14,089 16 0	5,134	2,801	8,144	
week of									
corresponding	2,824	447 12 10	21,430 10	757 0 0	23 3 0	1,229 5 10	118	211	329
date of	34 13 1	.....	65 9 10	1 14 11	103 5 10	.....	.....	.....	.....
51,079	8,089 14 9	2,10,302 20	7,294 8 0	643 11 0	16,038 1 9	4,491	2,877	7,368	

\* Added number of passengers 48,103 to Coaching, and deducted Mds. 0-10 and Rs. 0-1-0 from Merchandise, and Rs. 4 from other earnings, on account of to quarter ended 30th September 1884.

Statement of gross receipts of the Ghazipur-Dildarnagar State Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.

SENDING 1885.		RECEIPTS FOR WEEK ENDING 18TH DECEMBER 1884.			TOTAL RECEIPTS FROM 1ST APRIL 1884 TO 16TH DECEMBER 1884.			TOTAL RECEIPTS FROM 1ST APRIL 1884 TO 18TH DECEMBER 1884.			Total increase in 1884.	Total decrease in 1884.
Rank.	Per mile worked.	Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked.		
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
12	1,225	102	1,055	66	12	32,450	2,705	12	24,023	2,835	1,805	

SINDIA STATE RAILWAY.

Approximate Return of Traffic for week ended 13th December 1884 on 74 miles open.

	COACHING TRAFFIC.		MERCHANDISE AND MINERAL TRAFFIC.		Other earnings (estimated).	Total earnings.	TRAFFIC TRAIN-MILES RUN.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
Total traffic for the week	3,700	Rs. A. P. 3,717 1 0	MDS. S. 32,745 0	Rs. A. P. 4,534 13 0	Rs. A. P. 139 0 0	Rs. A. P. 4,673 13 0	731	1,315	2,046
Or per mile of railway	.....	49 14 8	.....	61 9 3	1 9 8	113 0 7	.....	.....	.....
For previous 23 weeks of half-year	*99,092	*31,744 13 1	11,37,045 28	*35,324 8 3	*2,868 8 2	1,30,727 14 6	14,705	22,001	36,706
Total for 24 weeks	103,404	85,461 14 1	12,00,793 20	50,000 0 3	2,777 14 2	1,48,140 2 6	15,026	23,840	38,866
COMPARISON.									
Total for corresponding week of previous year	4,336	2,695 0 0	56,172 0	2,977 7 0	116 4 0	6,781 12 6	439	1,083	1,472
Per mile of railway corresponding week of previous year	49	49 8 1	.....	30 16 2	1 9 0	61 0 8	.....	.....	.....
Total to corresponding date of previous year	100,413	83,226 5 4	2,61,053 20	50,437 7 0	2,847 0 0	1,46,580 12 4	*14,708	21,405	36,113

\* Added number of passengers 49,103 to Coaching, Rs. 31-9-0 to Merchandise, and Rs. 297-4-5 to other earnings, on account of the Supplemental Return to quarter ended 30th September 1884.

Approximate Statement of gross receipts of the Sindia State Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.

RECEIPTS FOR WEEK ENDING 13TH DECEMBER 1884.			RECEIPTS FOR WEEK ENDING 13TH DECEMBER 1884.			TOTAL RECEIPTS FROM 1ST APRIL 1884 TO 13TH DECEMBER 1884.			TOTAL RECEIPTS FROM 1ST APRIL 1884 TO 13TH DECEMBER 1884.			Total increase in 1884.		Total decrease in 1884.	
Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked.				
	Rs.	Rs.		Rs.	Rs.		Rs.	Rs.		Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
744	4,765	6 1/4	744	4,427	113	744	5,31,123	3,305	744	2,10,480	3,300		12,334		

## BENGAL PROVINCIAL RAILWAYS.

## Weekly Statement of Traffic Receipts.

Latest return received.	Name of Railway.	Length open.	RECEIPTS FOR WEEK ENDING.		TOTAL RECEIPTS FROM 1ST JANUARY.		Total increase in 1884.	Total decrease in 1884.
			27th October 1883.	23th October 1884.	To 27th October 1883.	To 23th October 1884.		
1884.		Miles.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
35th October	Northern Bengal	240	59,214 0 0	49,720 0 0	18,29,448 0 0	16,55,715 0 0	.....	1,73,733 0
1st November	Tirhoot	226	14,318 0 0	18,337 0 0	5,03,733 0 0	2,50,354 0 0	2,53,381 0 0	.....
18th do.	Nallhati	274	1,612 0 0	1,421 0 0	60,414 0 0	64,721 0 0	.....	4,307 0 0
	Total	500	55,454 0 0	60,408 0 0	23,01,613 0 0	24,76,470 0 0	24,237 0 0	.....

## DARJEELING-HIMALAYAN RAILWAY COMPANY, LIMITED.

	Rs. A. P.
Earnings for week ending 6th December 1884	8,006 0 0
Corresponding week last year	8,275 0 0
Decrease	409 0 0
Receipts from 1st July to 6th December 1884	1,85,274 5 2
from 1st July to 8th December 1883	1,93,494 13 7
Increase	1,779 7 7
Miles open week ending 6th December 1884	50
Corresponding week last year	50
Receipts per mile open week ending 6th December 1884	160 1 11
Corresponding week last year	169 4 10
Decrease	8 3 11

DARJEELING, the 13th December 1884.

W. STEVENSON, Secretary.



# SUPPLEMENT TO The Calcutta Gazette.

WEDNESDAY, DECEMBER 31, 1884.

## OFFICIAL PAPERS.

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## Proceedings of the Council of the Lieutenant-Governor of Bengal for the purpose of making Laws and Regulations.

Saturday, 20th December 1884.

### Present:

HIS HONOR THE LIEUTENANT-GOVERNOR OF BENGAL, *President*.  
 The HON. H. J. REYNOLDS.  
 The HON. A. PHILLIPS, *Acting Advocate-General*.  
 The HON. C. P. L. MACAULAY.  
 The HON. A. P. MACDONNELL.  
 Colonel the HON. S. T. TREVOR, R.E.  
 The HON. C. B. GARRETT.  
 The HON. MOULVIE ABDUL JUBBAR.  
 The HON. CHUNDER MADHUB GHOSE.  
 The HON. A. B. MILLER.  
 The HON. KUMAR BOYKANTONATH DE.  
 The HON. RAI JOY PROKASH LALL BAHADOOR; and  
 The HON. G. IRVING.

### REGISTRATION OF PERMANENT TENURES.

The HON. MR. REYNOLDS introduced the Bill to provide for the registration of permanent tenures, and moved that it be read in Council. He said:—The explanation which I gave last Saturday of the scope and objects of this Bill

seems to render it unnecessary that I should do more on the present occasion than invite the attention of the Council to the Bill which has been circulated to Hon. Members, and ask them to compare its provisions with the statement I made on that occasion. The Bill, after a few preliminary sections, which are taken up with the necessary definitions, is divided into three Chapters. The first Chapter relates to the procedure to be adopted in places in which registration is optional. It provides that application may be made for the registration of tenures either by proprietors of land or tenure-holders, and that it should be made to the Subordinate Judge; and then it makes provision for due notice to be given to all persons concerned to file any objections which they may wish to put forward; it provides also for summary decision in cases which admit of their being summarily decided, and for the framing of issues for regular decision on such points as are in dispute, and cannot be settled in any other way. The second Chapter prescribes the nature of the registers to be kept by the Collector, and this Chapter applies to registration, both in cases in which registration is optional, and also in local areas in which registration may possibly be made compulsory. The Chapter, as I said, provides for the nature of the registers to be kept up, and it also contains provisions for what is to be done to carry out the mutation of names, in cases of transfer and succession. And with regard to this provision I wish to invite the attention of Hon. Members to sections 25 to 30 of the Bill, and to point out that those sections provide, in the case of the mutation of names, for just as much facility and opportunities being given for putting forward and the hearing of objections, as in original cases of applications for the registration of the tenure itself. From what has passed in another place, I understand that some landlords have felt apprehensions that, under the cover of the mutation of names, claims and documents may be put forward transferring tenures and containing stipulations and conditions which the zemindars might not be inclined to acknowledge, but which nevertheless, unless they objected to them in time, they might be considered to have acquiesced in. Those sections therefore provide that, in the case of mutation of names, full opportunity shall be afforded for objections to be made and decided. Then Chapter III provides for the procedure in local areas in which the Local Government may declare that registration shall be compulsory, and these provisions are mainly based on what I may call the corresponding sections of the Bengal Land Registration Act (VII of 1876). The Government is disposed to attach much importance to this measure as a necessary complement to the provisions of the Bengal Tenancy Bill. If, indeed, we possessed in the Lower Provinces a complete record of rights, such as has been framed in other parts of Northern India, it might not be necessary to legislate specially for the registration of one class of tenancies. Possibly some of the present generation may survive to see the day when we shall have in every village and estate of Bengal a record of the rights and interests of every class of the agricultural population, from the zemindar down to the humblest tenant. But that time, though it may one day come, is certainly still very distant. The work will be one of great labour and expense, and the agency for establishing and maintaining the record has still to be created. In the meantime this Bill will in some measure supply, for one numerous and important class of tenancies, what I hope may eventually be attained for all. The registration of permanent tenures will afford much valuable information regarding the economic conditions of the country, the different gradations of landlords, and the extent to which sub-infeudation has been carried; it will facilitate the settlement of many disputed questions; and it will enable the Government to afford substantial assistance to proprietors in the recovery of their rents.

The HON. JOY PROKASH LALL said:—I beg with the permission of the President to make a few observations on that section of the Bill which contains a definition of "permanent tenure." Your Honor must be aware that there are in Behar occupancy rights which are heritable and by custom transferable. Then there is the *guzashia* tenure, which is heritable and also transferable, but liable to enhancement of rent. These rights are not yet recognized by law; the people of Behar would therefore wish to know whether this Bill will treat such tenure-holders as *mukhtaridars* and *musafidars*, and the like. But if the Bill goes further than that, and the tenures to be affected are not well defined, great

litigation and expense will follow, and both the Government as well as the people will be affected. I have nothing further to urge, except to repeat that the nature of the tenures in Bengal and Orissa are different from those in Behar.

The Hon. MR. REYNOLDS said in reply:—I understand the Hon. Member not so much to object to the provisions of the Bill, as to complain that some of the definitions contained in it are not sufficiently clear and precise. With regard to what he said on the question of *guzashta* tenures, I would ask him to refer to the definition of "tenure" which has been drafted in accordance with the Land Registration Act of 1876, as including every interest in land, except estates and the interests of raiyats or under-raiyats. Now, as I understand, these *guzashta* tenants are admitted to be raiyats, although raiyats having rights and privileges, such as fixity of tenure and perhaps also fixity of rent; but I never understood that it was claimed for them that they possessed any other rights than those of raiyats. In that case it is clear that they will not come under the definition of the Bill at all. But there are holders of other tenures to which I understand the Hon. Member to refer, such as *mokuraidars* and *muafidars*, which do come under the definition. Tenures, such as *ijaras*, which are not of a permanent nature, do not come under it.

HIS HONOR THE PRESIDENT said:—I understand the Hon. Member to say that his objections rather refer to the circumstances and condition of things in Behar, as being different from those in Bengal, and that possibly, unless those circumstances and conditions are borne in mind, there might be a difficulty as regards the particular definition of "tenure" in this Bill. The Hon. Member also referred to certain special tenures in Behar, but from the difficulty I experienced in hearing what he said, I am not in a position to discuss the question. As, however, the name of the Hon. Member is proposed to be placed on the Select Committee to which the Bill will be referred, no doubt the objections which he suggests will be fully considered in Committee.

The motion was then put and agreed to, and the Bill referred to a Select Committee consisting of the Hon. Mr. MacDonnell, the Hon. Mr. Garrett, the Hon. Moulvie Abdul Jubbar, the Hon. Joy Prokash Lall, and the Mover.

#### INSPECTION OF PRIME-MOVERS.

The Hon. MR. REYNOLDS moved for leave to introduce a Bill to amend Bengal Act III of 1879. He said: This Act of 1879 is an Act for the Inspection of Steam-boilers and Prime-movers, and extends to the town and suburbs of Calcutta and the town of Howrah. It does not apply to locomotive steam-engines or to steam-vessels. The Act provides that no boiler or prime-mover shall be used without a certificate granted under the Act, and in force at the time being; and it further provides for the appointment of Inspectors who, under section 5, are required carefully to examine boilers and prime-movers in every part thereof, and it requires the owner to afford all reasonable facilities for such examination, and all such information as may reasonably be required. But in point of fact, I understand that this provision of the law is not literally carried out; the inspection is practically limited to boilers and does not extend to prime-movers. The Boiler Commissioners some time ago brought the matter to the notice of the Government, and pointed out that the Act is not complied with, and that to carry out its provisions will cause very serious difficulty and inconvenience. They explain that, when a boiler has to be inspected, it can very easily be cooled down, and the examination and inspection can be made without interfering with the course of business in general, and the working of the mill or other factory. But this is not the case if the prime-mover has to be examined. The examination of the prime-mover, if it is to be anything more than a mere examination only in name, if it is to be such an examination as is referred to in section 5, will involve the stoppage of work, and will also possibly involve the taking of the engine to pieces, or at any rate the dismantling of it to a certain extent; and that will be a serious inconvenience, not only to mill-owners and persons of that kind, but to the community in general. They point out that this provision of the law will apply also to the engines and pumps used in the water-supply of Calcutta, and that if the examination of the prime-movers attached to them is to be made, the Public may some day find themselves

without water; and they add that there is really no great necessity for a minute examination of prime-movers, and that if an accident happened to prime-movers it would not have anything like the same disastrous effect as the explosion of a boiler. They further state that the prime-movers are in charge of qualified Engineers who thoroughly understand every part of the machinery, and have every inducement in their own interests and reputation to see that their engines are really in good order. The Boiler Commissioners recommend that rules should be laid down for putting engines and boilers in charge of qualified persons, and that certificates of competency should be given to such persons by some authority recognized by Government. These opinions of the Boiler Commissioners were referred for the special opinion of various bodies of mill-owners and of the Chamber of Commerce, and the opinion of those bodies was unanimous—*first*, that there was no real necessity for the examination of prime-movers; and *secondly*, that such examination would cause very serious inconvenience and expense to the persons concerned. I had occasion, in connection with this subject, to look at the provisions of the corresponding Acts of the other Presidencies, and I found that the wording of the Bombay Act is very much the same as the wording of our own Act, and I understand that this difficulty has not been felt in Bombay; but whether the examination in such detail as is required by our law is there carried out or not, I am not in a position to say. The Act of 1882, which was passed for British Burma, is of a very different character. It requires prime-movers to be examined just in the same way as the Bengal Act does, but it also provides for the granting of certificates of competency to the Engineer in charge, and declares that the certificate of the Engineer as to the condition of the engine shall be accepted when granted on such authority. The actual recommendation of the Boiler Commissioners is that the Act shall be modified by omitting the words "prime-mover" in those sections of the Act where it occurs. I think it may perhaps be a further question whether it will not be well to adopt the same system as in British Burma, and to retain power for the inspection of prime-movers, and at the same time give a certificate of competency to the Engineer in charge. That, however, is a matter which may be considered hereafter. The motion being now merely for leave to bring in a Bill, it involves only the recognition by the Council of the necessity for some legislation on this subject.

The motion was put and agreed to.

#### KIDDERPORE DOCKS.

The Hon. Mr. REYNOLDS moved for leave to introduce a Bill to enable the Commissioners for making Improvements in the Port of Calcutta to provide docks in the Port. He said:—I believe it is unnecessary to detain the Council with any lengthy history of the circumstances which have led to the proposal for the introduction of this Bill. Some of those present may remember the state of Calcutta before 1870, when the present Port Trust was established. At that time it is hardly too much to say that there were no jetties, no wharves, and no appliances for the landing and shipping of goods; but since the constitution of the present Port Trust in 1870 very great progress has been made. There are now eight jetties supplied with export and import warehouses, and having a large number of hydraulic cranes and steam cranes, and there is also a floating steam crane capable of lifting 30 tons. There is also a continuous line of wharves along the foreshore, and a tramway that connects the jetties with the Eastern Bengal Railway; and while giving all these advantages, the Port Commissioners have been able entirely to abolish port dues in Calcutta, and to effect a substantial reduction in the cost of pilotage, and at the same time to maintain the survey, buoyage, and lighting of the river in a more efficient state than has ever been done before. But with all their efforts, the Port Commissioners are unable to keep up with the growing requirements of the traffic. The eight jetties which have been provided afford accommodation to about 200 vessels in the year, but we require space for about five or six times that number. The gross tonnage of the Port has increased during the last five years in round numbers from about 1½ millions to 2 millions of tons; the exports have increased from 1½ millions to 1¾ million tons; and the annual downward traffic of the East Indian Railway, which was under half a million tons during the five years ending with 1875, during the next period of five years reached nearly a million



tons, and at present, perhaps, if it has not actually reached it, must be near upon 1½ million tons. The further extensions of the railway system, some of which have already been constructed, some of which are in progress, and some of which still remain to be undertaken, will all tend to the same result—the result of pouring into Calcutta a daily increasing mass of goods, for the handling and transport of which new and extended appliances will be necessary. These considerations led the Government in 1882 to appoint a Committee to report on the advisability of constructing docks at Diamond Harbour to relieve the trade of the Port. The majority of that Committee reported in favour of the construction of docks at Diamond Harbour, but the mercantile members of the Committee opposed the scheme on the ground of the inconvenience that would arise to the ordinary course of business, owing to the distance of the docks some 35 or 40 miles from Calcutta. It appeared that those objections were felt, not only by the mercantile members of the Committee, but were also endorsed by the Chamber of Commerce and the mercantile community in general. The Government therefore resolved not to act on the recommendations of the majority of the Diamond Harbour Docks Committee, and in 1883 a fresh Committee—a joint Committee of the Port Commissioners and of the Chamber of Commerce—was appointed to consider the general question of extending and strengthening the accommodation for the shipping in Calcutta. That Committee submitted a very admirable and exhaustive report, in which they reviewed all the circumstances of the case. The first point which they considered was, whether it is desirable to extend accommodation by adding to the number of jetties, or by constructing docks, and for reasons set forth in their report, one of which is the greater protection afforded by docks against cyclones, they considered docks in every way preferable to adding to the number of jetties. Then there was the question where the docks should be constructed, and various sites were considered, and the conclusion of the Committee was that Kidderpore is the most favourable site for the proposed docks. The report of the Committee was submitted to several experts, both in England and this country; it was approved by the Government of Bengal, recommended by the Government of India, and has been sanctioned in all essential particulars by the Secretary of State. It having been determined then that docks should be constructed at Kidderpore, the question arose, what official or body of officers should be entrusted with the construction and management of the docks? and the Government had the choice of several alternatives; they might have kept the docks under the Marine Department of the Government itself, or they might have created a new body of Dock Trustees, or they might have entrusted the construction and management of the docks to the existing Port Commissioners. The decision the Government came to was, that the Port Commissioners should be entrusted with the duty, and perhaps I may be permitted to say, although a Port Commissioner myself, that this was determined upon owing to the confidence which the management of the present Trust by the Port Commissioners has excited both in the Government and the mercantile community in general, but it was also almost a necessary conclusion in consequence of the intimate connection between the existing works of the Port Commissioners and their proposed extension by the construction of new docks. The new docks and the present jetties are intended to be connected by a tramway, and the whole will be worked as one concern by the Port Trust. Then a further difficulty arose, viz. that the Government were advised that the Port Commissioners, under the existing law, had no power to construct docks. The hon. and learned Advocate-General (Mr. Paul) came to the conclusion that the construction of docks was clearly outside the provisions of Act V of 1870, and as the Port Commissioners are unable to construct docks, it is clearly out of their power to raise a loan for the purpose. It was therefore considered necessary to introduce a Bill to enable the Port Commissioners to construct docks and raise a loan for that purpose. The proposed Bill has been circulated, and is in the hands of Hon. Members, and I will just point out that it is nothing more than an enabling measure; it enables the Commissioners to construct and maintain docks, to raise a loan for the purpose, and to levy tolls and charges which have been approved by the Local Government and published in the *Calcutta Gazette*. And with regard to the form which



the measure has assumed, I may explain that it was intended at first to introduce a consolidating Act bringing together all the various provisions of law relating to the Port Commissioners into one enactment; and that, no doubt, is a work which must be undertaken before long. Act V of 1870 has already four amending Acts, and it is very desirable to consolidate them; but such a consolidation of the law would involve a great deal of delay. It is therefore now proposed only to pass a short enabling measure to provide for the present difficulty.

As a summary of the whole question, I believe I cannot do better than read to the Council, if it will permit me to do so, the concluding words of the despatch in which the Government of India recommend the adoption of this scheme to the Secretary of State. They said:—

"In conclusion, we would observe that the pressing need of improved facilities for the increasing trade of Calcutta cannot be too strongly insisted upon. The trade is rapidly expanding, and there is probably no public work on this side of India at the time which can be said to be as important as the Calcutta Port Improvements. The construction of docks will undoubtedly give great facilities, now wanting, to Calcutta merchants in the prosecution of their business, the process of loading and unloading cargoes will be considerably expedited, goods will be better and more conveniently warehoused, and the sorting and cleaning of the wheat before shipment will be promoted; while the general concentration of business will be a welcome relief to those concerned with trade and shipping. The measure now proposed is formally supported by an absolute consensus of official and non-official opinion, and has the entire approval of the local commercial Public. We trust, therefore, that we may be favoured with sanction to its being undertaken at the earliest practicable date."

These are the grounds on which the Government of India recommended the adoption of this scheme, and it is on these grounds that I now ask the Council to grant leave for the introduction of the proposed Bill.

The motion was put and agreed to.

HIS HONOR THE PRESIDENT said:—I think it necessary to explain that it is desirable that the form in which the Bill has been drawn up should be considered both by the Local Government and also by the Government of India; therefore, before we proceed to the next motion on the paper to introduce the Bill, we should submit the papers on the subject, and the Bill which has been drafted, for the consideration of the Government of India. I hope their approval of the form in which the Bill has been prepared will be received in time to enable us to proceed with the Bill at the next meeting of the Council. Therefore the two remaining motions in the name of the HON. MR. REYNOLDS will be postponed to the next meeting.

The Council was adjourned to Saturday, the 3rd January 1885.

LIBERALITY OF THE MAHARANI SURNOMOYEE OF COSSIMBAZAR,  
MOORSBEDABAD.

GENERAL DEPARTMENT—EDUCATION.

*Calcutta, the 30th December 1884.*

RESOLUTION.

READ—

A letter from the Commissioner of the Presidency Division, No. 150t.—ME, dated the 21st November 1884, forwarding a copy of a letter from the Maharani Surnomoyee, of Cossimbazar in Moorsbedabad, placing at the disposal of Government Rs. 1,50,000 for the purpose of promoting female medical education in Bengal.

Read again—

Letter to the Director of Public Instruction, No. 418T—G, dated 29th June 1883, declaring females fully admissible to the classes of the Calcutta Medical College.

Resolution, dated 6th May 1884, establishing four "Female Medical Scholarships" tenable for five years in the Calcutta Medical College.

THE problem of creating a class of qualified female medical practitioners to attend upon native women in their sickness is one which presents many special difficulties in a country where the habits and traditions of the women of the upper classes prevent them from availing themselves of the services of men as their medical advisers. Attempts have been made from time to time to supply what has always been felt to be a pressing want, but the efforts of Government in this direction have until lately been impeded, partly by the difficulty of introducing a serious innovation into the conservative domain of medical practice, and partly by the inadequacy of the funds which could be appropriated to the furtherance of so large an object. In the letter of 29th June 1883, cited in the preamble to this Resolution, Mr. Rivers Thompson reviewed at length the various objections raised on professional grounds to the admission of women to the classes of the Calcutta Medical College, and gave expression to his final decision, that on grounds of both principle and expediency the exclusion of women could no longer be maintained. In the Resolution of the 6th May 1884 he endeavoured to give fuller effect to this policy by offering special encouragement in the form of scholarships to ladies who, after passing the First Arts Examination at the University, should elect to enter the Calcutta Medical College as students. This was as large a measure of encouragement as the Provincial finances would admit of, and up to the present time the Lieutenant-Governor has had little hope of being able to offer further support to a movement which commands his hearty sympathy. The Maharani Surnomoyee, Lady of the Order of the Crown of India, whose good name in the cause of public charities and private benevolence is already known throughout India, has now come forward to supplement the resources of the State with the munificent donation of Rs. 1,50,000 which she has placed at the disposal of the Bengal Government for the promotion of female medical education. In the letter communicating her gracious intentions, the Maharani imposes no restriction upon the mode in which her gift should be administered; but it is understood that she would be gratified if the money could be expended on the construction of a hostel for native ladies studying medicine in Calcutta. The Lieutenant-Governor agrees with the Maharani in thinking that an institution of this kind will materially forward the cause of female medical education in Bengal. The difficulties experienced by young men in pursuing their education in large towns have already led to the establishment of hostels for their accommodation. These difficulties are of course greatly increased in the case of ladies, some of whom may come from distant homes; and the proposed institution may help to open a useful career to many women who otherwise would have no opportunity at all of instruction in medical science. The Lieutenant-Governor has much pleasure therefore in accepting the very liberal offer of the Maharani, who has thus

increased the large claim to public gratitude which she has already so signally established, and added one more to the many past recognitions by this Government of her acts of beneficence to the people of Bengal.

Measures will at once be taken to acquire the land selected for the site of the hostel, which will be called after the name of the noble donor. The Government Architect will be directed to prepare a design and estimate of the cost of the building.

By order of the Lieutenant-Governor of Bengal,

A. P. MacDONNELL,

*Secretary to the Govt. of Bengal.*

No. 15Ct.—M E., dated Camp Burwa (Moorshedabad), the 21st November 1884.

From—A. SMITH, Esq., Commissioner of the Presidency Division,

To—The Secretary to the Government of Bengal, General Department.

I HAVE the honour to forward, for the information and orders of the Lieutenant-Governor, a copy of a letter No. 385, dated 12th instant, from the Maharanee Surnomoye of Cassimbazar in Moorshedabad. She places at the disposal of the Government the sum of one and a half lakhs of rupees for the purpose of assisting towards the provision of properly educated female medical practitioners for the treatment of persons of her own sex. The Maharanee's munificent offer should, I think, be accepted and suitably acknowledged, and I am sure that the Government will gladly give such further aid as may be needed to carry out her proposals.

No. 385, dated Cassimbazar Rajbari, the 12th November 1884.

From—MAHARANE SURNOMOYEE, Member of the Imperial Order of the Crown of India, Cassimbazar,

To—The Magistrate and Collector of Moorshedabad.

THE want of properly educated female medical practitioners for the treatment of persons of my sex has been felt by me for a long time, and gradually with the advance of my age, a deep impression has been made in my mind. I had always hoped and expected that some kind-hearted and noble-minded person would do something for the removal of the sad want, but I regret to observe that this hope has not yet been realized. Consequently, I have now made up my mind to do what little I can to lay the foundation, as it were, of a work which might be completed in the hands of far abler and more competent persons.

2. I had thought of establishing an institution in this district of Moorshedabad for imparting medical education to the females through the medium of the Bengalee and the English languages. But, as at present advised, I have been convinced that an institution of the kind is not likely to be a success here, whereas one, if located in Calcutta and incorporated with the Medical College there, is sure to succeed and realize my long-cherished hopes. An institution of that sort, however, is likely to require a fund which, having regard to my finances and present state of affairs, I regret to say I do not feel myself justified in endowing in full.

3. Under the circumstances, I have thought it proper to place, at the disposal of our noble and benevolent Government, the sum of rupees one lakh and fifty thousand, in order that it may be pleased to accept the amount and supplement the same by such aid as may be necessary, and adopt such measures as may be considered desirable and proper, so that my intentions may be carried out and fulfilled. Already lying under grave obligations to the Government, which has not unfrequently shown me kindness and favour which I shall ever remember, I need scarcely add that my gratitude will know no bounds, if the Government will be kind enough to approve of and accept my humble proposal. I shall be ready and very happy to pay the amount whenever I may be called upon to do so.

4. I have therefore the honour to request the favour of your bringing the proposal to the notice of His Honor the Lieutenant-Governor of Bengal through the proper channel.

OUTBREAK OF CHOLERA IN THE SERAMPORE SUB-DIVISION.

No. 1441, dated Calcutta, the 23rd December 1884.

From—COLMAN MACAULAY, Esq., Secretary to the Government of Bengal,  
To—The Commissioner of the Burdwan Division.

I AM directed to acknowledge the receipt of your endorsement No. 5T, dated the 12th instant, with which you submit a copy of a report from the Sub-Divisional Officer of Serampore on an outbreak of cholera in the Mahesh and Rishra wards of the Serampore Municipality. The disease made its appearance on the 17th November last, and lasted for 16 days, during which period 112 deaths took place. You bring to the notice of Government the good work done by Mr. Collier, the Sub-Divisional Officer, Dr. Barker, the Civil Medical Officer of Serampore, and Mr. Finlay, the Manager of the Hastings Mills, who took prompt and vigorous action in order to suppress the outbreak. The last-named gentleman appears to have rendered valuable help to the Sub-Divisional Officer and the Civil Medical Officer, and to have supplied, free of cost, medicines, disinfectants, and good drinking water from the factory.

2. In reply, I am directed to say that credit is due to Mr. Collier and Dr. Barker for their exertions in putting down the outbreak. I am to request that you will be good enough to convey to Mr. Finlay an expression of the acknowledgments of Government for the assistance which he rendered to the local officers.

3. The correspondence will be published in the *Calcutta Gazette*.

No. 5T, dated Camp Howrah, the 12th December 1884.

Memo. by J. BEAMES, Esq., Commissioner of the Burdwan Division.

Copy forwarded to the Secretary to the Government of Bengal, Judicial Department, for information. The Sub-Divisional Officer and the other gentlemen mentioned are deserving of credit for the prompt and vigorous action taken by them.

No. 2130, dated Serampore, the 4th December 1884.

From—F. R. S. COLLIER, Esq., Sub-Divisional Officer of Serampore,  
To—The Magistrate of Hooghly.

I HAVE the honour to submit a report, giving some particulars with regard to the recent outbreak of cholera at Rishra and Mahesh.

2. The first case occurred on the 17th November, and the disease spread very rapidly. I was absent in camp at the time the disease broke out, but returned on the 21st, and then heard of it for the first time. I immediately wrote to the Civil Surgeon, requesting him to visit the locality and report what measures he considered necessary. In reply, the Civil Surgeon stated that he had already visited the place on the 20th instant, and had made arrangements for the treatment of the sufferers. He complained that he had received no official intimation from the police before the 22nd.

3. On the 22nd I obtained some disinfectants from Dr. Barker, and sent the municipal overseer to the spot with instructions to use them. He displayed a great want of alacrity in carrying out my orders both then and subsequently, and I was obliged to warn him that I should dismiss him if he failed to do his best to check the progress of the epidemic. The number of deaths which had occurred up to the 22nd was ten.

4. On the morning of the 23rd I visited the village, accompanied by the Civil Surgeon. I found that no sulphur had yet been burnt by the Vice-Chairman, although he had been requested to get this done. I at once gave orders for the thorough fumigation of the busti by sulphur fires, and saw a number of them started. On the 24th I again visited the place and met the Civil Surgeon. We sent for 100 maunds of wood and all the sulphur we could get in the town and had it burned. We also sent into Calcutta for a maund of sulphur and a dozen bottles of rum to make tonic mixture for the coolies. There had been 26 cases and 14 deaths on the previous day. Mr. Finlay, of the Hastings Mills, to whose assistance I am much indebted, supplied gratis a large amount of wood and sulphur. It being represented to me by Mr. Finlay that the old burying ground behind the village was quite full, I ordered it to be closed, and selected a new one some three hundred yards further from the village. Having ascertained by personal inspection that the old graveyard was offensive, I had it covered a foot deep with jute waste which was then set on fire; after the jute waste had been burned, it was covered a foot deep with ashes from the mill.

5. On the 25th I again visited the *busti* and went all over it. Complaints having been made that Hindus were superficially burned on the river bank, I prohibited this practice in future, and ordered that they should be thoroughly burnt at the expense of the municipality. I found that no less than 13 new cases and 14 deaths had occurred since the previous day, and that the deaths now amounted to over fifty. As the outbreak was getting very serious, I placed the overseer under Dr. Barker's order, with a suitable warning directing him to leave all other work undone, deputed four constables to the *busti* to prevent infraction of sanitary rules, burnt another hundred maunds of wood and a large amount of sulphur, and had all the drains covered with quicklime; constables were stationed to prevent the resort to tanks supposed to be dangerous, and a pure supply of water from the mills was laid on across the Grand Trunk Road. Two additional compounders to assist the Civil Surgeon were also given by the Mill Manager.

6. Without troubling you with unnecessary repetition, I may state that similar measures have been taken day by day until within the last two days. I visited the place daily, and the Civil Surgeon was there twice a day as a rule, treating a large number of patients himself.

7. On the 25th the deaths fell to nine and on the 26th to seven. On the 27th and 28th there were eight and nine respectively; but it was noted that the new cases were not of so virulent a type, and we began to hope that the worst was over. On the 29th and 30th there were five deaths each day. On the 1st there were six deaths, but on the 2nd only two. Since then there have been no new cases, and I think that we may conclude that the outbreak is over. One case has, however, occurred in Serampore itself since, and two or three in Chattrā, but the disease has not assumed an epidemic form.

8. The total number of deaths reported by the police as having occurred at Mahesh and Rishra up to date is 112.

Great credit is, I consider, due to Dr. Barker for the care which he took of the patients, and for the large share of personal labour which he took upon himself in visiting and treating them. The assistance which Mr. Finlay rendered in supplying medicines, disinfectants, and good water, and personally in assisting in the measures taken for checking the spread of the epidemic, was most valuable.

No. 2116, dated Hooghly, the 8th December 1884.

Memo. by G. TOYNBEE, Esq., Magistrate of Hooghly.

COPY submitted to the Commissioner of the Burdwan Division for information. The good services of Mr. Collier, Dr. Barker, and Mr. Finlay, will, I hope, be acknowledged by the Commissioner. Due warning of the outbreak was sent to the Military authorities, who arranged for crossing troops at Ghyretty Ghât and marching them *via* Barrackpore instead of *via* Kotrung.

## RESOLUTION ON THE CANAL REVENUE REPORTS FOR 1883-84.

## GOVERNMENT OF BENGAL.

## PUBLIC WORKS DEPARTMENT—IRRIGATION.

No. 1901 I.A., Calcutta, the 29th December 1884.

## RESOLUTION.

## THE CANAL REVENUE REPORT FOR 1883-84.

## READ—

The Canal Revenue Reports for 1883-84, and the Chief Engineer's note on the same.

The total capital outlay (direct charges) invested, up to the end of the year 1883-84, on irrigation works in Bengal, of which capital and revenue accounts are kept, has amounted to Rs. 6,87,51,362, divided as follows:—

	Rs.
Productive Public Works ... ..	5,47,20,704
Famine-relief protective works ... ..	3,00,000
Imperial ordinary works ... ..	8,26,524
Provincial works ... ..	79,04,134
<b>Total</b> ... ..	<b>6,87,51,362</b>

The expenditure coming under the head Imperial ordinary was on preliminary expenses for projects which have since been abandoned or are in abeyance. The large increase in the amount at the debit of Provincial works is due to the expenditure to date on the Calcutta Canals (Rs. 51,92,444) being now for the first time shown under this head. A capital and revenue account for these canals was opened on the 1st of April 1883.

The receipts from the canals classed as productive public works for the last three years are shown in the table following:—

	Receipts, 1881-82.	Receipts, 1882-83.	Receipts, 1883-84.
<i>Orissa Canal.</i>	Rs.	Rs.	Rs.
Water-rates ... ..	1,24,290	1,80,325	1,11,856
Navigation ... ..	83,208	1,08,473	1,10,162
Miscellaneous ... ..	15,655	31,212	15,860
<b>Total</b> ... ..	<b>2,23,151</b>	<b>3,20,010</b>	<b>2,37,868</b>
<i>Midnapore Canal.</i>			
Water-rates ... ..	1,18,588	1,04,060	1,31,000
Navigation ... ..	1,20,708	1,46,922	1,20,580
Miscellaneous ... ..	10,780	17,023	12,996
<b>Total</b> ... ..	<b>2,50,074</b>	<b>2,68,010</b>	<b>2,64,576</b>

				Receipts, 1881-82.	Receipts, 1882-83.	Receipts, 1883-84.
				Rs.	Rs.	Rs.
<i>Hidgellee Tidel Canal.</i>						
Navigation	...	...	...	45,848	43,694	62,817
Miscellaneous	...	...	...	1,446	1,338	1,278
Total				47,294	45,032	63,590
<i>Sone Canals.</i>						
Water-rates	...	...	...	6,03,930	5,66,465	4,84,209
Navigation	...	...	...	93,116	71,295	85,193
Miscellaneous	...	...	...	39,246	47,007	34,405
Total				7,36,292	6,84,677	6,03,807
GRAND TOTAL				12,56,811	13,17,729	11,69,841

The balances of water rates outstanding on the 1st April 1884 and at the close of the two preceding years are shown in the table below:—

				1st April 1882.	1st April 1883.	1st April 1884.
				Rs.	Rs.	Rs.
Orissa Canals	...	...	...	1,14,142	1,21,640	52,203
Midnapore Canal	...	...	...	1,81,701	1,42,475	1,44,691
Sone Canals	...	...	...	4,86,849	3,11,665	4,34,793
Total				6,82,692	5,75,780	6,20,887

The receipts from all sources during the year amounted to Rs. 11,69,841 and the working expenses (direct charges) to Rs. 10,69,394,\* so that the net revenue realized was Rs. 1,00,447 against Rs. 1,67,701 in 1882-83. Including interest, Rs. 21,60,758 payable to the Imperial treasury, and indirect charges debitable to revenue, the deficit of the year amounts to

Rs. 21,10,285. The financial results of the year's operations have been disappointing, the receipts being nearly 1½ lakhs of rupees less than those of the previous year, and the arrear balances, in which there was a considerable decline in 1882-83 showing a considerable increase. Under the head "Navigation" there was a slight increase in the revenue of the year, so that the falling off was entirely in water-rates and miscellaneous receipts. The decrease in the latter was due to less work having been carried out at the Dehree workshops, and to there having been no receipts in England from the leasehold property which belonged to the late East India Irrigation and Canal Company.

The main decrease has occurred in the item water-rates, the receipts from which were Rs. 1,23,785 less than in 1882-83, whilst the assessments were Rs. 1,27,227 in excess. The demand statements for a large proportion of this amount were, however, only made out in the last two months of the year. In Midnapore there was an increase of Rs. 26,940 in the water-rate collections as compared with the preceding year, so that the falling off occurred wholly in the receipts from the Sone and Orissa Projects, which showed a decline of Rs. 82,256 and Rs. 68,469 respectively. The decrease would have been even greater but for the reduction of Rs. 69,444 in the amount of arrear balances of water-rates in Orissa. The collections in Behar have improved during the current year, and the indifferent results of 1883-84 are due to the short irrigation of former years.



The areas irrigated during the last three years are shown below :—

		1881-82.	1882-83.	1883-84.	
		Acres.	Acres.	Acres.	
ORISSA	{	Khureef	1,26,611	1,28,530	47,035
		Rubbee	5,403	4,100	1,381
		Perennial	264	398	844
	Total	1,32,278	1,33,028	48,760*	
MIDNAPORE	Khureef	1,04,434	1,01,939	07,919	
SONE	{	Khureef	55,355	65,514	1,34,732
		Rubbee	86,795	15,999	99,504
		Perennial	21,891	15,275	6,732
		Hot weather irrigation	20,794	2,481	8,524
		Five years' lease	43,240	74,555	1,01,322
	Total	1,78,075	1,78,824	3 50,614	
Grand Total		4,14,787	4,08,791	4,97,293	

\* Exclusive of 26,661 acres irrigated in an unauthorized manner.

There was, it will be noticed, a large increase in the area under irrigation from the Sone Canals, whilst in Orissa the leases for two-thirds of the area formerly irrigated were not renewed. A Commission has lately been appointed to enquire into the causes of the disinclination of the Orissa ryots to irrigate, and the Lieutenant-Governor awaits their report before passing any orders on the various proposals which have been submitted for consideration. As regards the Midnapore and Sone Canals, the area irrigated was measured by the powers of the canals to carry water, the demand far exceeding the supply available. The rains in September in both places were deficient and in October almost entirely absent, the result being that the crops beyond the limits of the canal water supply were in many places a total failure and in others seriously deficient. It unfortunately happens in seasons like the one described that the anxiety of the cultivators to obtain water leads them to set at defiance the water distribution arrangements of the Engineers. In Midnapore, with crops dying wherever not irrigated, the Superintending Engineer describes the cultivators as cross-damming the distributaries, regardless of authority and even after they had obtained sufficient water for their fields, keeping the outlets open for fishing purposes. This feature of the year's irrigation deserves serious consideration, as the chief value of the Bengal Canals is in seasons of drought, and it is imperative that the most should be made of the water-supply available.

The receipts credited under the head navigation amounted to Rs. 3,78,242, which is Rs. 7,048 in excess of the previous year's collections. This small increase, however, by no means measures the actual progress made, as the returns of the boats which passed through the canals showed a total of 821,934 tons in 1883-84 against 715,009 tons in 1882-83. Very considerable reductions in the tolls charged on the Orissa Canals were made with effect from the 1st of December 1883, and a surcharge of one-fourth of a pie per head per mile formerly levied on passengers was abolished both for the Orissa and Midnapore Canals from the same date. These reductions will, it is feared, check for the time, the steady growth in the navigation revenue of the canals which has from the first distinguished the canals in the Province. The surcharge was, however, found to be an irritating impost which offered opportunities for peculation, and the tolls during certain months of the year in Orissa were higher than those imposed elsewhere.

The Midnapore transport service continues to be managed by the Calcutta Steam Navigation Company, Limited, and the traffic arrangements are reported to be satisfactory to the public. The transport service on the Patna Canal has been made over to a contractor, and it is intended to withdraw the Government service from all canals so soon as private firms or companies are in a position to afford the requisite facilities for transport.

The tollage collections since 1876-77 are shown below :—

		Orissa.	Midnapore.	Hidgellee.	Sone.	Total.
		Rs.	Rs.	Rs.	Rs.	Rs.
1876-77	...	23,881	67,651	44,572	4,852	1,39,956
1877-78	...	32,814	1,06,917	60,971	26,774	2,28,506
1878-79	...	57,042	77,340	59,723	29,332	2,23,437
1879-80	...	62,349	91,861	44,918	27,604	2,26,772
1880-81	...	41,297	77,143	53,333	39,819	2,11,597
1881-82	...	53,219	93,060	46,848	64,143	2,51,270
1882-83	...	66,736	1,06,157	43,094	39,304	2,55,891
1883-84	...	61,602	1,08,931	62,317	48,032	2,80,882

The Lieutenant-Governor cannot regard the results of the year in a financial point of view as satisfactory. The cost of the canals, 21 lakhs of rupees yearly, is borne by the whole province, whilst the advantages are reaped by a few favoured districts. The Commission lately appointed to enquire into the administration of the Orissa Canals has been instructed to report on the actual profits derived from the works, independent of the share received by Government, and their enquiries will afford grounds for coming to a conclusion as to the propriety of endeavouring to secure for the State a larger share of the benefits reaped.

Mr. H. C. Levinge, Chief Engineer and Secretary to Government in the Public Works Department, retired on the 1st of January 1884. A public notification acknowledging his services appeared in the *Calcutta Gazette* for the 9th January 1884. But His Honor takes the present opportunity of again recording his appreciation of Mr. Levinge's administration of the Irrigation Branch of the Public Works Department for the five years during which he was in charge.

ORDER.—Ordered that a copy of this Resolution and of the note and its accompaniments, be submitted to the Government of India in the Public Works Department, for information; also that copies be forwarded to the Appointment, Revenue and Financial Departments of this Government; the Board of Revenue, Lower Provinces; the Commissioners of the Presidency, Burdwan, Patna, and Orissa Divisions; the Collectors of 24-Pergunnahs, Hooghly, Midnapore, Burdwan, Patna, Shahabad, Gya, Cuttack, and Balasore; the Superintending Engineers of the Orissa, South-Western, and Sone Circles, and the Examiner of Public Works Accounts, for information.

By order of the Lieutenant-Governor of Bengal,

J. M. McNEILE, *Lieut.-Col., R.E.*,

*Joint-Secretary to the Govt. of Bengal,*

*P. W. Dept.*

GOVERNMENT OF BENGAL.  
PUBLIC WORKS DEPARTMENT,—IRRIGATION BRANCH.

REVENUE REPORT.

*Note by* LIEUTENANT-COLONEL J. M. McNEILE, R.E., *Chief Engineer, on the Canal Revenue Reports for the year 1883-84.*

THE capital outlay (direct charges) on irrigation works in Bengal, during the year 1883-84, amounted to Rs. 22,04,808, made up as follows:—

			Rs.
Productive public works	...	...	14,03,439
Famine relief protective works	...	...	3,00,000
Imperial ordinary works	...	...	(—)1,200
Provincial works	...	...	5,02,569
Total	...	...	22,04,808

2. The total capital (direct charges) invested up to the end of the year 1883-84 was Rs. 6,37,51,362, as follows:—

			Rs.
Productive public works	...	...	5,47,20,704
Famine relief protective works	...	...	3,00,000
Imperial ordinary works	...	...	8,26,524
Provincial works	...	...	79,04,134
Total	...	...	6,37,51,362

3. The particulars of the above outlay are given below:—

				OUTLAY.	
				During the year.	To end of the year.
				Rs.	Rs.
<b>CAPITAL OUTLAY (DIRECT CHARGES).</b>					
<b>PRODUCTIVE PUBLIC WORKS.</b>					
Orissa canals	...	...	...	6,89,152	2,05,63,644
Midnapore canal	...	...	...	1,74,072	81,28,171
Hidgellee tidal canal	...	...	...	.....	17,72,699
Sone canals	...	...	...	5,90,215	2,42,56,190
Total	...	...	...	14,03,439	5,47,20,704
<b>IRRIGATION AND NAVIGATION WORKS.</b>					
<i>Canals in abeyance or abandoned—</i>					
Tirhoot project	...	...	...	.....	5,31,425
Damoodur „	...	...	...	(—)1,200	1,52,673
Hoochly „	...	...	...	.....	1,42,426
<i>Canals under construction—</i>					
Sarun project	...	...	...	(—)4,004	6,64,019
Orissa coast canal	...	...	...	6,54,276	23,47,671
Circular and Eastern canals	...	...	...	1,52,297	51,92,444
Total	...	...	...	8,01,369	90,30,658
GRAND TOTAL	...	...	...	22,04,808	6,37,51,362

4. The amount of Rs. 3,00,000 charged against the head "Famine Relief Protective Works" is the contribution sanctioned by the Government of India for the Orissa coast canal during the year under review, and is included in the outlay on that canal.

5. The Circular and Eastern canals have been classed as a project for which capital and revenue accounts are kept with effect from 1st April 1883, and the capital outlay incurred previous to that date, Rs. 50,40,147, is for the first time included in the column "To end of the year," thereby altering its total from what it should be according to the corresponding statement given in the report of the previous year.

6. The indirect charges other than interest, viz. (1) capitalized abatement of land revenue, (2) loss by exchange on payments in England, and (3) charges for leave and pension allowance debitable to capital, for and up to the year 1883-84, are shown below:—

				INDIRECT CHARGES OTHER THAN INTEREST.	
				During the year.	To end of the year.
CAPITAL OUTLAY (INDIRECT CHARGES).				Rs.	Rs.
PRODUCTIVE PUBLIC WORKS.					
Orissa canals	...	...	...	15,068	7,64,582
Midnapore canal	...	...	...	12,325	2,62,895
Hidvellee tidal canal	...	...	...	.....	65,378
Sone canals	...	...	...	14,206	9,54,846
Total				41,599	20,47,701
IRRIGATION AND NAVIGATION WORKS.					
<i>Canals in abeyance or abandoned—</i>					
Tirhoot project	...	...	...	.....	74,650
Damoodur "	...	...	...	.....	16,122
Hooghly "	...	...	...	.....	2,816
<i>Canals under construction—</i>					
Saran project	...	...	...	116	27,087
Orissa coast canal	...	...	...	19,368	53,465
Circular and Eastern canals	...	...	...	3,237	(a) 59,090
Total				22,721	2,33,230
GRAND TOTAL				64,320	22,80,931

(a) Inclusive of Rs. 55,853 on account of indirect charges of the previous years, not shown in the corresponding statement of the Revenue Report for 1882-83.

7. The total capital invested on irrigation works in Bengal, inclusive of indirect charges other than interest, amounted, up to the end of the year 1883-84, to Rs. 6,60,32,293 as follows:—

	Rs.
Productive public works	5,57,68,405
<i>Irrigation and navigation works—</i>	
Canals in abeyance or abandoned	9,20,112
Canals under construction	83,43,776
Total	6,60,32,293

8. The following statement shows the total receipts, working expenses, and charges for interest, in respect of productive public works, for the year 1883-84, as compared with the previous five years:—

PARTICULARS.	1883-84.	1882-83.	1881-82.	1880-81.	1879-80.	1878-79.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Receipts from all sources	11,69,841	13,17,729	12,56,811	10,19,375	11,08,781	8,59,071
Working expenses (direct charges) ...	(a) 10,69,304	11,50,028	10,43,134	9,93,448	9,21,763	8,05,810
Net revenue ...	1,00,447	1,67,701	2,13,677	25,927	1,82,018	53,491
Charge for interest ...	21,60,758	21,15,505	20,75,158	22,74,758	22,01,767	21,20,418
Deficit ...	20,60,311	10,47,804	18,61,511	22,48,831	20,22,749	20,66,955
Indirect charges debitable to revenue ...	48,074	43,428	60,700	57,280	53,906	44,529
Total deficit ...	21,10,285	10,91,230	19,22,211	23,06,111	20,76,715	21,11,484
Rate per cent. on capital outlay ...	3.71	3.59	3.53	4.33	4.01	4.28

(a) Exclusive of Rs. 427. Expenditure in England on account of the houses acquired from the E. I. C. Co., vide A. G., Public Works Department, No. 691, dated 16th September 1884.

9. The accumulated charges of interest on the capital outlay in irrigation and navigation works not classed as productive, having, in accordance with the Government of India, Public Works Department, Circular No. IV P. W., dated 1st May 1884, been eliminated from the Administrative Accounts of the Irrigation Branch for the year 1883-84, prepared by the Examiner of Public Works Accounts, Bengal, are not shown in this note.

The amount of interest for Productive Public Works for the year under review is Rs. 21,60,758. This is payable by the Local Government to the Imperial Treasury.

10. The following statement shows the particulars of the total accumulated debt on account of interest and unpaid working expenses amounting, up to the end of the year 1883-84, to Rs. 1,48,10,401, inclusive of indirect charges debitable to revenue:—

PARTICULARS.	Productive public works.	IRRIGATION AND NAVIGATION WORKS.		TOTAL.
		Canals in existence or abandoned.	Canals under construction.	
	Rs.	Rs.	Rs.	Rs.
Receipts from all sources ...	84,88,841	.....	1,76,17,952	2,61,06,793
Working expenses (direct charges) ...	93,18,740*	.....	64,72,106	1,57,90,846
Profit ...	(—) 8,29,899	.....	1,11,45,756	1,03,15,857
Charges for interest ...	2,44,99,229	.....	.....	2,44,99,229
Profit ...	(—) 2,53,29,128	.....	1,11,45,756	(—) 1,41,83,372
Indirect charges debitable to revenue ...	4,89,452	.....	1,37,577	6,27,029
Total profit to end of 1883-84 ...	(—) 2,58,18,580	.....	1,10,08,179	(—) 1,48,10,401
Rate per cent. on capital outlay ...	(—) 45.48	.....	131.93	(—) 22.74

\* Exclusive of Rs. 427, as noted above.

The receipts and charges of the Circular and Eastern canals, according to the revenue account opened during the year under review, are included in the column "Canals under construction."

11. The total expenditure on irrigation, navigation, and agricultural works during 1883-84 amounted to Rs. 46,44,009, distributed as follows:—

	Ra.	Ra.
54.—Productive public works—		
Capital account (Imperial) ... ..	.....	(a) 13,38,974
39.—Productive public works—		
Revenue account (Provincial) ... ..	.....	(b) 10,69,394
46.—Irrigation and Navigation works—		
Imperial ... ..	(—) 1,200	
Provincial ... ..	9,90,646	
		9,89,446
Famine relief protective works (Imperial) ... ..	.....	3,00,000
Agricultural works—		
Imperial ... ..	7,47,345	
Provincial ... ..	1,87,170	
Contribution ... ..	11,680	
		9,46,195
<b>Total</b> ... ..	.....	<b>46,44,009</b>

(a) Exclusive of Rs. 64,465 expenditure in England.

(b) " " 427 " " as noted before.

12. The total receipts of the year amounted to Rs. 19,66,807, shown below:—

	Ra.	Ra.
XXVIII.—Productive public works—		
Revenue account (Provincial) ... ..	.....	11,69,841
XXXIII.—Irrigation and Navigation works—		
(Provincial) ... ..	.....	7,90,215
Agricultural works—		
Imperial ... ..	4,628	
Provincial ... ..	2,123	
		6,751
<b>Total</b> ... ..	.....	<b>19,66,807</b>

13. The following statement shows the areas irrigated and assessed, as compared with those of the five previous years:—

YEAR.	OMITSA CANALS.				MIDNAPORE CANAL.				BORE CANALS.				TOTAL.			
	Kharuf.	Rabbee.	Perennial.	Total.	Kharuf.	Rabbee.	Perennial.	Total.	Kharuf.	Rabbee.	Perennial.	Total.	Kharuf.	Rabbee.	Perennial.	Total.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1882-83 ...	47,754	1,532	844	49,130	97,011	.....	.....	97,011	244,674	39,364	6,232	350,414	350,414	190,690	7,020	407,434
1883-84 ...	149,530	4,300	2008	153,838	101,172	.....	.....	101,172	142,760	15,390	18,376	173,524	173,524	20,660	16,670	400,714
1881-82 ...	720,011	5,403	2004	725,418	104,434	.....	.....	104,434	119,780	74,705	21,801	215,286	215,286	42,463	22,165	479,914
1880-81 ...	112,173	4,877	178	117,228	105,802	.....	.....	105,802	104,304	50,200	23,127	177,631	177,631	30,241	25,500	433,372
1879-80 ...	103,174	3,810	216	107,200	100,171	.....	.....	100,171	41,132	62,200	27,184	130,556	130,556	24,400	27,304	382,416
1878-79 ...	102,500	3,517	224	111,241	56,701	124	.....	56,825	60,564	77,120	10,624	148,308	148,308	63,071	19,627	308,006

## ORISSA CANALS.

14. The capital, interest, and revenue accounts of these canals are given below :—

## 1.—CAPITAL ACCOUNT.

HEADS OF ACCOUNT.	Outlay during 1883-84.	Outlay to end of 1883-84.
	Rs.	Rs.
<b>DIRECT CHARGES.</b>		
I.—Works ... ..	5,06,004	1,47,39,424
II.—Establishment ... ..	1,07,630	38,71,468
III.—Tools and plant ... ..	62,067	18,78,756
IV.—Suspense accounts ... ..	(—) 31,387	1,47,012
Total ... ..	5,44,314	2,06,36,660
V.—Less receipts on capital account ... ..	5,162	73,016
Net total ... ..	6,39 152	2,05,63,644
<b>INDIRECT CHARGES.</b>		
Capitalization of abatement of land revenue ... ..	...	32,363
Loss by exchange ... ..	...	2,91,089
Leave and pension allowances ... ..	15,068	4,38,130
Total Indirect Charges ... ..	15,068	7,64,582

## 2.—INTEREST ACCOUNT.

	Rs.
Interest charges to end of 1882-83 ... ..	92,78,161
Ditto for 1883-84 ... ..	8,09,762
Total ... ..	1,00,87,923

## 3.—REVENUE ACCOUNT—(ACTUALS).

		EXPENDITURE.		REVENUE.	
		During 1883-84.	To end of 1883-84.	During 1883-84.	To end of 1883-84.
		Rs.	Rs.	Rs.	Rs.
Works (extensions and improvements) ... ..	.....	1,644		1,11,856	11,43,570
Repairs and maintenance ... ..	1,89,617	22,20,879		1,10,152	6,84,790
Establishment ... ..	91,713	10,58,722		15,860	1,71,214
Tools and plant ... ..	11,292	1,26,954			
Profit and loss ... ..	.....	640			
Refunds of revenue ... ..	68	2,820			
Direct expenditure in England ... ..	(a) ... ..	6,518			
Total expenditure ... ..	2,92,690	34,18,177			

(a) A sum of Rs. 427 was paid in England on account of the houses acquired from the E. I. C. Co., during the year 1883-84 as advised in A. G., Public Works Department, No. 691, dated 16th September 1884.

15. The total debt, exclusive of indirect charges, on account of interest and unpaid working expenses was Rs. 8,64,584 for the year under review, and Rs. 1,14,67,840 up to date.



16. The expenditure and earnings for the year 1883-84 are given below :—

EXPENDITURE.		EARNINGS.	
	Rs.		Rs.
Repairs and maintenance ...	1,89,564	Water-rates ...	74,206
Establishment ...	91,713	Navigation ...	1,07,147
Tools and plant ...	11,282	Miscellaneous ...	15,860
Refunds of revenue and compensation ...	121	Direct revenue realized in England ...	.....
Direct expenditure in England ...	.....		
		Total earnings ...	1,97,213
		Deficit ...	95,477
Total expenditure ... (a)	2,92,090	Total ...	2,92,590

(a) Exclusive of Rs. 427 as noted before.

17. The statement below shews the total lengths of canals and distributaries which were open at the close of the year, and the areas commanded and irrigated by each canal :—

NAME OF CANAL.	Length of canal open.		Length of distributaries and village channels.	Area protected from flood.	Area under command.	Area provided with distributaries.	Assessed areas.	
	For irrigation and navigation.	For irrigation only.					1882-83.	1883-84.
	Miles.	Miles.	Miles.	Acres.	Acres.	Acres.	Acres.	Acres.
Kendrapara ...	39	.....	830	150,421	101,110	57,800	65,060	17,840
Gobree ...	15	.....	.....	77,261	21,200	.....	4,304	808
Puttanchoud ...	.....	47	.....	85,800	51,000	.....	22,004	5,465
Kendrapara Extension ...	15	.....	.....	8,000	7,000	.....	.....	.....
Tulshimati ...	27	.....	714	18,000	15,200	15,250	10,719	1,510
Machcong ...	4	75	1,000	49,000	71,000	35,100	31,012	5,961
High Level, 1st Range ...	33	.....	1172	62,483	60,000	44,730	13,055	11,887
High Level, 2nd Range ...	121	.....	.....	.....	120,000	.....	.....	.....
High Level, 3rd Range ...	19	.....	.....	.....	57,500	.....	1,500	805
Total ...	1644	62	3524	368,163	507,000	182,380	131,019	48,760

The lengths of main canal are the same as those in operation at the close of the year preceding, but 13.75 miles of distributary were opened during the year. In addition to the areas regularly assessed 26,661 acres are reported to have been irrigated in an unauthorized manner. The very marked decrease in the irrigated area will be adverted further on; here it may be noted, that the percentage of area leased to that commanded by distributaries has fallen from 63½ per cent. in 1882-83 to 22 per cent. in 1883-84.

18. The areas irrigated and the rainfall yearly for the last ten years are shown in the table following :—

YEAR.	Kharoof.	Rubbeo.	Perennial.	Total.	Rainfall.
	Acres.	Acres.	Acres.	Acres.	Inches.
1874-75 ...	19,740	2,454	207	22,400	61.00*
1875-76 ...	13,991	4,102	314	18,409	70.00*
1876-77 ...	26,069	3,991	321	30,382	44.26*
1877-78 ...	95,088	3,071	336	98,495	47.94*
1878-79 ...	105,500	5,517	233	111,250	61.98*
1879-80 ...	105,180	3,616	236	109,032	60.85*
1880-81 ...	112,171	4,877	173	117,221	85.10*
1881-82 ...	126,611	5,403	264	132,278	56.89†
1882-83 ...	128,530	4,100	308	133,028	58.98†
1883-84 ...	47,035	1,381	344	48,760	57.18†

\* Mean of observations in Cuttack and Maraghat.  
† Ditto at 18 stations.

19. The whole of the five-years' leases expired in November 1882; and, as was anticipated, there was an inclination on the part of the ryots to see if better terms could not be obtained by delaying to renew them. This course was favoured by the rainfall in June and July (20½ inches) being sufficient for the needs of cultivation, and it was not until late in September and October that water was much required. Up to the 1st of October only 14,758 acres had been leased; so soon however as real need of water was generally felt, there was a rush to lease, and by the end of the season engagements for 47,595 acres had been entered into. There was also a large amount of unauthorised irrigation reported by the Superintending Engineer at 21,801 (a) acres, and shown in statement VIII of the Deputy Superintendent's report as 28,661 acres. It is in years when there is an early cessation of the rains that water is of most value, and the incentive to misappropriate it strongest, especially as, should rain subsequently fall, evidence to substantiate the fact of irrigation is most difficult to procure.

A native association, the head-quarters of which is at Balasore, deputed an agent to visit the irrigated area, and to ascertain what grievances the cultivators suffered; an account of this gentleman's investigations has since been received and will be considered by the Commission which the Lieutenant-Governor has appointed to enquire into the administration of these canals. Meanwhile the area under lease has, up to the 1st of November 1884, reached 56,121 acres, and the circumstances of the year under review and that now current have been such that only lands which really needed canal water to save their crops have been irrigated.

20. As regards the policy of keeping the drainage lines of the country open, which is specially alluded to in the Commissioner's report, expenditure on such improvements adds nothing directly to the canal revenue, and they were undertaken mainly in consequence of representations made by every civil officer who has been concerned with canal management previous to Mr. Larminie. It is possible that in some seasons a small percentage of lands immediately adjacent to the natural drainage lines of the country would be more productive, if no special provision for drainage was made; in years of heavy rainfall this, however, is not the case, and the greater part of the country always benefits.

The matter will be thoroughly discussed with the Superintending Engineer and civil officers in December, so that any real remediable causes of complaint may be removed. If it was a question of the policy of keeping drainage channels open when it is for the benefit of the cultivators, generally, to have them closed, there could be no doubt in the matter; but the real point is that the interests of the large majority of the cultivators would always suffer by the closing of these channels, and that the injury, where there is any, can only affect an exceedingly small minority.

The impolicy of allowing the natural drainage channels of the country to be blocked up has been very forcibly brought to notice in almost every district of Bengal by this Department being called on to undertake remedial measures so soon as the consequences of the stoppage become fully apparent.

21. The total demand for the year on account of revenue recoverable by the Deputy Superintendent, including arrears of previous years, was Rs. 1,94,071; of this amount, Rs. 1,24,161 was realised, Rs. 8,763 remitted or written off as irrecoverable, and Rs. 61,147 remained due at the end of the year, of which Rs. 52,203 is the balance due on account of water-rates, and the remainder under the head "Miscellaneous."

The Deputy Superintendent remarks that the visit of the agent of the Orissa Association produced a general impression that the current year's water-rates would be reduced, and that the reduction would have retrospective effect. This impression had the effect of inducing the cultivators to postpone payment as long as possible, and rendered the process of recovery slow and tedious. The number of certificates filed under Act VII of 1880 during the year was only about one-fourth of those issued in 1882-83, but a large number of objections were disposed of under the Certificate Act, which are apparently referred to in paragraph 6 of the Commissioner's report, the full meaning of which is not quite clear.

Objections to the correctness of the assessment should be decided under the Irrigation Act, under section 91 of which the Commissioner is vested with

(a) It has since been reported that the Deputy Superintendent's figures are correct.

revisional jurisdiction. The proper procedure is laid down in Revenue Department letter No. 2779—1054L. R., of date the 9th December 1882, from which the following extract descriptive of the procedure prevailing in the districts watered by the Sone canals is taken:—

"On application to the canal authorities a ryot obtains a license to irrigate. The irrigated land is afterwards measured, and a *khatyan*, or statement of demand, is made out in the canal officer's *sharista*. One copy of this *khatyan* is sent to the Collector; another is served on the ryot by the canal authorities. Any objection on the part of the ryot is heard by the canal officer, from whose decision, an appeal lies to the Collector under section 91 of Act III of 1876, the Collector's order being final. So far the canal officer, whose chief duties are those of assessment, assists the collecting staff. If the ryot makes no objection under Act III, or if, having objected, his objection is overruled, the canal officer's functions cease, and the process of realization begins. A notice of demand is issued by the Collector, and the usual procedure under the Public Demands Recovery Act is followed, shortened, however, by the fact that the ryots' objections having already been determined under Act III, 1876, cannot be revived under the Certificate Act. This method of deciding objections under Act III, if introduced into Orissa, would obviate all necessity for enquiries under the Public Demands Recovery Act, and would render it unnecessary to vest the Canal Superintendent with the power of a Deputy Collector."

The recovery of demands for water-rates under the Certificate Act, regarding which there have been some complaints, is one of the points which has been referred to the Commission, alluded to in paragraph 19.

22. Owing to the small area of land leased, the duty of the water utilized is considerably less than in previous years. The usual table is given below, but the results are vitiated by the large amount of unauthorized irrigation which is not taken credit for:—

NAME OF CANAL.	Effective average discharge in cubic feet.	Total for each main canal.	Area of khureef leased.	Total area for each main canal, including branches.	Average duty of each cubic foot of water.	Average duty of water for each main canal, including branches.
	C. ft.	C. ft.	Acres.	Acres.	Acres.	Acres.
Kendrapara ...	151	.....	17,060	.....	112.08	.....
Pattamoondee ...	38	.....	8,498	.....	164.73	.....
Gobree ...	89	213	892	22,868	13.52	107.45
High Level, 1st range	177	177	11,915	11,915	67.31	67.31
Taldundah ...	29	.....	1,054	.....	36.34	.....
Machgong ...	74	108	8,686	9,690	116.70	94.07
Total ...	493	493	44,493	44,493	90.23	90.25

Water escaping is not included in the above discharges, and a better calculation would probably be to take the total discharges of the Kendrapara High Level and Taldundah canals (the other canals are branches) and to include in the area under irrigation the 26,861 acres irrigated without authority; calculated in this way the duty becomes  $\frac{71,154}{724} = 98.28$  acres per cubic foot.

23. The usual crop experiments were carried out during the year and details giving the results will be found in paragraphs 34 to 36 of the Superintending Engineer's report; the difference in favour of irrigation is more considerable than in 1882-83, and the produce of irrigated lands is valued at an average of Rs. 1.16 per acre in the Mahanuddy Division and Rs. 4.75 per acre in the Brahmini-Byturnee Division, above that from lands not irrigated.

24. The revenue credited during the year under the head "Navigation" amounted to Rs. 1,10,152. Of this sum, Rs. 61,602 was received from tolls on boats, and Rs. 48,550 was earned by the transport service.

The receipts since 1874-75 under this head are given below:—

	Tolls.	Transport service.	Total.
	Rs.	Rs.	Rs.
1874-75	21,412	Nil	21,412
1875-76	16,377	"	16,377
1876-77	22,881	"	22,881
1877-78	33,844	"	33,844
1878-79	57,042	"	57,042
1879-80	62,389	35,686	98,075
1880-81	41,297	30,105	71,402
1881-82	53,219	29,987	83,206
1882-83	66,736	41,737	1,08,473
1883-84	61,602	48,550	1,10,152

25. The length of navigable canals open (184½ miles) has remained the same as in the previous year, whilst there has been a decrease of Rs. 5,134 in the amount of tolls. This diminution is not, however, due to any falling off in the traffic, which it will be presently shown has slightly increased, but to a material reduction in the rate of tolls levied, which took effect from the 1st of December 1883. Up to that date a surcharge of quarter of a pie per head per mile was made on all passengers carried, and the rate of tolls during the eight dry months from November to June was double of that levied during the rest of the year. From the date mentioned the surcharge was abolished, and the lower rate only charged throughout the year.

The earnings of the year under this head were Rs. 1,07,147, compared with Rs. 1,10,129 in 1882-83.

26. Particulars regarding the tollage assessed compared with the previous year's results will be found in the table below :—

NAME OF CANAL.	Miles open.	Tollage.		Number of boats.		Tonnage.		Value of cargo.		Tollage per mile of canal.	
		1882-83.	1883-84.	1882-83.	1883-84.	1882-83.	1883-84.	1882-83.	1883-84.	1882-83.	1883-84.
		Rs.	Rs.	No.	No.	Tons.	Tons.	Rs.	Rs.	Rs.	Rs.
Taldundah ... ..	27	3,902	2,887	1,935	1,809	33,102	30,810	1,54,318	67,965	145'87	57'51
Bachang ... ..	4										
Kendrapara ... ..	80	54,303	44,324	7,455	6,267	79,224	64,744	32,29,279	32,25,930	780'45	640'92
Ditto Extension ...	12										
Golbura ... ..	12										
High Level, 1st range	33	6,763	5,737	2,653	2,361	14,457	12,006	5,55,855	5,05,400	305'03	263'54
Ditto, 2nd ... ..	12½	3,452	3,900	1,118	1,862	11,228	17,723	1,41,325	1,75,140	275'61	304'90
Ditto, 3rd ... ..	19	1,170	945	587	594	4,023	4,842	14,900	44,000	61'52	49'68
Total ... ..	144½	69,650	59,531	15,495	15,567	1,42,093	1,43,683	43,99,769	47,62,665	482'83	332'51

27. From the statement following it will be seen that as regards private traffic there has been an increase under all heads except that of tollage, in which there has been a decrease consequent on the reduction in rate previously mentioned :—

SECTION.	Government traffic.	Private traffic.	Total traffic.
Tollage ... ..	Rs. —785	—10,243	—11,028
Number of boats ... ..	No. —340	+ 2,422	+ 2,082
Tonnage ... ..	Tons —6,262	+ 9,854	+ 3,592
Value of cargo ... ..	Rs. —45,301	+ 4,06,198	+ 3,60,897
Tollage per mile of canal ...	Rs. —4'78	—62'27	—67'05

The total decrease of tollage has amounted to 15·85 per cent. during the year, of which 14·72 per cent. is due to the private traffic upon the canals.

28. Classified according to the description of goods carried, the private traffic is shown in table following :—

	TONNAGE			
	1882-83.	1883-84.	Increase.	Decrease.
	Tons.	Tons.	Tons.	Tons.
Articles of food ... ..	39,094	48,703	9,609	
Stimulants ... ..	23	29	6	
Clothing ... ..	18	5		8
Staples of manufacture ...	1,950	2,803	853	
Fuel ... ..	434	1,003	569	
Building materials ... ..	3,289	3,357	68	
Cooking utensils ... ..	89	177	88	
Miscellaneous ... ..	9,252	9,578	326	
Passengers ... ..	16,558	10,575		5,983
Empty boats ... ..	15,791	19,415	3,622	
Total ... ..	86,493	95,643	15,141	5,991
Increase ... ..		9,150		

The increased traffic has been mainly in goods coming under the heads of "articles of food" and "staples of manufacture," and has been general throughout the canal system, omitting the Taldundah and Machgong canals. The reduction of tolls amounts to 43 per cent. on that previously charged and it is feared that it will be some years before the increased traffic will be sufficient to allow of the former earnings being again reached.

The present rate of toll is equivalent to a charge of 7-11 pie per 100 mds. per mile, calculated on the displacement caused by the boat.

29. The cost of the establishment employed to work the locks was Rs. 8,603 against Rs. 8,329 expended under that head in 1882-83. In the accounts a sum of Rs. 6,078, properly debitable to the transport service, is shown under the head "Navigation," which includes both the lock establishment and the permanent staff of the transport service.

30. The total receipts, as credited in the accounts, from the Government transport service amounted to Rs. 48,550, or Rs. 6,813 more than in the preceding year; whilst the working expenses, inclusive of the cost of the permanent establishment, aggregated Rs. 29,883, leaving a profit of Rs. 18,667 against Rs. 3,267 realized in 1882-83. The profit was almost entirely due to the Cuttack-Chandbally line, as the steamer *Pioneer* employed between Cuttack and Bhuddruck did little more than cover her working expenses, though no tolls were charged. Details regarding the traffic are given in the table below:—

	TRAFFIC, 1883-84.									TRAFFIC, 1882-83.								
	Kendrapara and Taldandah Canals.			High Level Canal.			Total.			Kendrapara and Taldandah Canals.			High Level Canal.			Total.		
	Passengers.	Goods.	Total earnings.	Passengers.	Goods.	Total earnings.	Passengers.	Goods.	Total earnings.	Passengers.	Goods.	Total earnings.	Passengers.	Goods.	Total earnings.	Passengers.	Goods.	Total earnings.
	No.	Mds.	Rs.	No.	Mds.	Rs.	No.	Mds.	Rs.	No.	Mds.	Rs.	No.	Mds.	Rs.	No.	Mds.	Rs.
April	1,110	.....	2,763	145	264	101	1,361	264	3,894	1,625	.....	3,321	447	1,370	505	1,499	1,270	2,768
May	.....	.....	3	.....	.....	.....	.....	2	.....	.....	.....	67	244	801	138	144	301	280
June	1,963	.....	3,794	.....	.....	.....	1,963	.....	3,194	810	.....	1,123	60	153	327	900	168	1,300
July	1,813	.....	2,161	328	350	174	1,639	349	3,235	2,868	1,188	4,191	2,003	640	1,163	3,975	2,002	5,947
August	1,328	.....	3,175	174	201	66	1,340	261	3,361	1,367	1,355	3,199	681	511	471	2,375	1,345	2,870
September	1,936	.....	2,810	344	321	170	1,157	323	2,960	1,743	.....	2,834	514	1,744	321	3,979	1,740	3,346
October	1,679	.....	3,314	306	231	123	2,179	231	4,339	2,735	.....	4,938	777	1,307	667	3,593	1,107	5,329
November	2,332	1,301	5,999	210	244	129	2,553	1,540	5,134	2,900	.....	3,620	646	317	625	2,002	537	4,300
December	1,996	.....	4,778	194	265	127	2,190	338	4,905	2,664	2,903	4,817	761	1,164	745	3,381	4,071	5,573
January	1,926	1,920	3,946	284	304	307	3,192	1,529	4,163	2,322	2,186	4,436	770	1,047	750	3,089	3,133	5,186
February	1,471	563	3,607	402	509	443	1,973	1,372	3,932	2,009	519	3,790	746	1,066	713	2,319	1,502	4,308
March	1,845	641	3,703	357	1,434	746	2,602	1,008	4,431	2,429	1,861	4,876	1,037	2,048	1,200	3,684	4,500	5,536
Total	19,325	4,078	39,201	2,821	4,810	2,319	23,149	8,808	40,579	22,623	2,865	40,599	7,597	12,630	8,317	39,419	22,021	49,816

31. Government has for some time past been desirous of leaving the transport service to private enterprise; and it has only been kept up so long, as a state undertaking, in the absence of competition providing for the public wants by private companies.

Since the close of the year the steamer *Aurora* has been withdrawn from the Cuttack-Chandbally line, a private firm having taken up the work. It is understood that a large company interested in the coasting trade are building steamers with the view of extending their operations to Cuttack.

32. The miscellaneous revenue realized during 1883-84 amounted to Rs. 15,860 against Rs. 31,212, the receipts of the previous year. Of this sum Rs. 14,483 was, however, the proceeds of leasehold property in England

belonging to the late East India Irrigation and Canal Company, so that in reality there was a falling off in this branch of revenue of Rs. 869 only.

The various sub-heads on account of which money was received are shown in the table following, which also gives the corresponding figures for 1882-83 :—

Source of Revenue.	YEAR IN WHICH RECEIVED.		DIFFERENCE.	
	1882-83.	1883-84.	Increase.	Decrease.
	Rs.	Rs.	Rs.	Rs.
Plantations	776	811	35	.....
Rent of lands	3,655	4,650	995	.....
Canal produce	597	382	.....	215
Rent of buildings	2,684	2,832	248	.....
Fines and refunds	170	.....	.....	170
Sales of tools, &c.	.....	59	59	.....
Fisheries	551	479	.....	72
Sales of water	6	87	81	.....
English leasehold property	14,483	.....	.....	14,483
Miscellaneous	8,390	6,810	.....	1,580
<b>Total</b>	<b>31,212</b>	<b>15,860</b>	<b>1,368</b>	<b>16,720</b>
<b>Decrease</b>	.....	.....	.....	<b>15,852</b>

33. The receipts under the three heads—water rates, navigation, and miscellaneous—for the last ten years are shown below :—

Year.	Water-rates.	Navigation.	Miscellaneous.	Total.
	Rs.	Rs.	Rs.	Rs.
1874-75	20,382	21,412	6,691	48,485
1875-76	20,330	10,377	8,783	45,490
1876-77	40,378	22,881	11,298	74,557
1877-78	1,17,818	33,844	9,445	1,61,107
1878-79	1,16,416	57,042	16,484	1,89,942
1879-80	1,57,747	98,075	23,365	2,79,187
1880-81	1,78,047	71,402	20,329	2,69,778
1881-82	1,24,290	88,206	15,655	2,28,151
1882-83	1,80,325	1,08,473	31,212	3,20,010
1883-84	1,11,856	1,10,152	16,860	2,37,868

34. The working expenses for the same years is given in the table following :—

PARTICULARS.	1874-75.	1875-76.	1876-77.	1877-78.	1878-79.	1879-80.	1880-81.	1881-82.	1882-83.	1883-84.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
<b>1.—Maintenance.</b>										
Works	1,17,367	1,36,360	1,40,484	1,37,045	1,47,113	2,34,748	1,99,354	2,17,753	2,22,431	1,97,564
Establishment, including direction and accounts	20,190	31,501	31,832	32,500	39,073	41,018	44,400	50,108	51,100	43,000
Tools and plant	18,070	5,823	11,038	8,234	17,238	8,389	13,200	13,318	14,923	11,722
Compensation	.....	.....	.....	41	623	412	777	414	345	68
Refunds of revenue	.....	.....	.....	.....	.....	1,205	1,262	1,031	2,001	.....
Direct expenditure in England	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
<b>Total maintenance</b>	<b>1,55,717</b>	<b>1,76,180</b>	<b>1,83,354</b>	<b>1,77,820</b>	<b>2,04,087</b>	<b>3,24,532</b>	<b>2,60,756</b>	<b>2,83,568</b>	<b>2,90,660</b>	<b>2,51,352</b>
<b>2.—Revenue management.</b>										
Irrigation establishment	35,014	25,793	28,001	32,708	27,006	38,794	34,819	37,002	37,002	33,472
Navigation	8,804	5,053	5,436	6,083	7,415	8,753	7,501	8,081	13,574	14,841
<b>Total revenue management</b>	<b>43,818</b>	<b>30,846</b>	<b>33,437</b>	<b>38,791</b>	<b>34,421</b>	<b>47,547</b>	<b>42,320</b>	<b>45,083</b>	<b>50,576</b>	<b>48,313</b>
<b>Total working expenses</b>	<b>1,99,535</b>	<b>2,07,026</b>	<b>2,16,791</b>	<b>2,16,611</b>	<b>2,38,508</b>	<b>3,72,079</b>	<b>3,03,076</b>	<b>3,28,651</b>	<b>3,41,236</b>	<b>3,00,000</b>

(a) Enclosure of Rs. 427 paid in England.

In addition, Rs. 12,840 has been debited to the project on account of indirect charges, so that for the year there has been a loss of Rs. 87,662 against Rs. 35,271 in 1882-83.

35. In 1882-83 there was, compared with 1881-82, a reduction in the maintenance charge of Rs. 7,449, and there has been a further decrease of Rs. 22,972 in the expenditure under this head during the year under review. The table below gives the details by main heads of works:—

HEAD.				1882-83.	1883-84.	Increase.	Decrease.
				Rs.	Rs.	Rs.	Rs.
Head works	...	...	...	73,094	49,949	.....	23,145
Main canals	...	...	...	85,841	86,525	684	.....
Distributaries	...	...	...	26,554	25,799	.....	755
Drainage	...	...	...	3,721	3,965	244	.....
Total				1,89,210	1,66,238	928	23,900
Decrease				.....	22,972	.....	22,972

36. The head works suffered less damage than usual, the total expenditure on the seven weirs and works connected therewith having been Rs. 49,949 against Rs. 73,094, the cost of maintenance in 1882-83. Their total length being 18,474 feet, the rate per foot run has fallen from Rs. 3.95 to Rs. 2.70. On the main canals there has been a slight increase in the cost of maintenance. The table below shews the cost for each canal separately:—

NAME OF CANAL.				1882-83.		1883-84.		Average cost per mile.	
				Miles.	Cost.	Miles.	Cost.	1882-83.	1883-84.
					Rs.		Rs.	Rs.	Rs.
Kendrapara	...	...	...	29	23,546	39	26,623	599	668
Pattamondae	...	...	...	47	8,489	47	6,160	179	131
Gobree	...	...	...	15	5,222	15	6,025	348	402
Kendrapara Extension	...	...	...	15	2,136	15	2,795	142	186
High Level, 1st range	...	...	...	33	18,128	33	18,206	549	552
Ditto, 2nd "	...	...	...	12½	3,422	12½	3,577	274	285
Ditto, 3rd "	...	...	...	19	2,619	19	6,981	190	367
Taldundah	...	...	...	27	14,208	27	10,652	528	394
Machgong	...	...	...	19	7,321	19	5,306	285	279
Total				236½	85,841	226½	85,525	379	382
Increase				.....	.....	.....	684	.....	3

37. The expenditure on maintaining the 639½ miles of distributaries in operation amounted to Rs. 25,799, being at the rate of Rs. 42 per mile against Rs. 40, the rate for the previous year. A further sum of Rs. 3,965 was expended on drainage channels and 61.79½ miles of embankment, the repairs of which are debitable to the revenue account of the canals.



## MIDNAPORE CANAL.

38. The Capital, Interest, and Revenue Accounts are given below:—

## 1.—CAPITAL ACCOUNT.

PARTICULARS.	Outlay during 1883-84.	Outlay to end of 1883-84.
<b>DIRECT CHARGES.</b>	<b>Rs.</b>	<b>Rs.</b>
I.—Works ... ..	14,670	53,19,256
II.—Establishment ... ..	2,562	19,19,383
III.—Tools and plants ... ..	93,773	8,30,157
IV.—Suspense account ... ..	65,005	89,552
<b>Total outlay</b> ... ..	<b>1,76,010</b>	<b>81,58,318</b>
V.—Less receipts on capital account ... ..	1,938	30,177
<b>Net total</b> ... ..	<b>1,74,072</b>	<b>81,28,171</b>
<b>INDIRECT CHARGES.</b>		
Capitalization of abatement of land revenue ... ..	6	14
Loss by exchange ... ..	11,960	79,728
Leave and pension allowances ... ..	359	1,83,153
<b>Total</b> ... ..	<b>12,325</b>	<b>2,62,895</b>

## 2.—INTEREST ACCOUNT.

Interest charges to end of 1882-83 ... ..	Rs.
Ditto for 1883-84 ... ..	37,61,784
	3,21,645
<b>Total to end of 1883-84</b> ... ..	<b>40,86,429</b>

## 3.—REVENUE ACCOUNT (ACTUALS).

	EXPENDITURE.			RECEIPTS.	
	During 1883-84.	To end of 1883-84.		During 1883-84.	To end of 1883-84.
<b>I.—Works and Repairs.</b>	<b>Rs.</b>	<b>Rs.</b>		<b>Rs.</b>	<b>Rs.</b>
Works (extensions and improvements) ... ..	.....	40,655	Water-rates ... ..	1,31,000	10,26,071
Maintenance and repairs ... ..	1,27,028	13,55,884	Navigation ... ..	1,20,580	10,29,042
Establishment, including direction and accounts ... ..	29,342	3,09,253	Miscellaneous ... ..	12,996	1,18,293
Tools and plant ... ..	31,249	1,64,134			
<b>Total works and repairs</b> ... ..	<b>1,88,199</b>	<b>18,73,926</b>			
<b>I (a).—Compensation</b> ... ..	<b>30</b>	<b>30</b>			
<b>II.—Revenue management.</b>					
Irrigation establishment ... ..	19,862	2,40,770			
Navigation establishment ... ..	7,511	96,635			
<b>Total</b> ... ..	<b>27,373</b>	<b>3,37,405</b>			
<b>III.—Refunds of Revenue.</b>	<b>44</b>	<b>61</b>			
<b>Total working expenses</b> ... ..	<b>2,15,646</b>	<b>22,11,422</b>			
Profit ... ..	48,930	(—)37,076			
<b>Total</b> ... ..	<b>2,64,576</b>	<b>21,74,346</b>	<b>Total</b> ... ..	<b>2,64,576</b>	<b>21,74,346</b>

39. The revenue account calculated on the earnings of the year is shown below :—

Expenditure.	Amount.	Earnings.	Amount.
<i>I.—Works and Repairs.</i>	<i>Rs.</i>		<i>Rs.</i>
Works (extensions and improvements) ... ..	.....	Water-rates ... ..	1,46,941
Maintenance and repairs ..	1,27,058	Navigation ... ..	1,20,148
Establishment, including direction and accounts ... ..	29,342	Miscellaneous ... ..	14,465
Tools and plant .. ..	31,229		
Total works and repairs ...	1,88,229		
<i>II.—Revenue management.</i>			
Irrigation establishment ..	19,862		
Navigation do. ... ..	7,511		
Total ... ..	27,373		
<i>III.—Refunds of Revenue.</i>	44		
Total working expenses ...	2,15,646		
Profit ... ..	65,908		
Total ... ..	2,81,554	Total ... ..	2,81,554

40. The usual table giving the areas irrigated during 1883-84 and year preceding is given below :—

PARTICULARS.	Totals as provided for in the revised estimate.	MIDNAPORE WEIR, RANGES NOS. IV AND V.		PANCHCOORAH WEIR, RANGE NO. III.		TIDAL RANGES, RANGES NOS. I AND II.		TOTAL.		REMARKS.
		1882-83.	1883-84.	1882-83.	1883-84.	1882-83.	1883-84.	1882-83.	1883-84.	
Length of distributaries and branch canals ...	298.12 miles	238.74	224.34	32.25	34.25	13.00	15.00	241.99	277.59	* Superintending Engineer's figures shown by the Deputy Superintendent as 101,639 acres.
Area commanded ...	135,000 acres	100,000	100,000	23,100	24,000	2,000	2,000	125,000	126,000	
Area irrigated ...	Acres	88,573	80,803	11,159	10,721	803	803	101,637	97,912	
Percentage of area irrigated on area commanded ... ..	.....	84.57	80.80	48.36	44.68	40.15	40.15	81.36	78.33	

There has, it will be noticed, been, compared with the preceding year, a decrease in the irrigated area of 3,718 acres.

41. The rainfall for the years 1882-83 and 1883-84 is shown in the table below, in which the average fall is also noted :—

STATION.	Rainfall, 1882-83.	Rainfall, 1883-84.	REMARKS.
Midnapore ... ..	43.61	66.04	Average of 15 previous years, 55.24.
Panchcoorah ... ..	51.92	51.59	Average of 14 previous years, 51.00.
Contai ... ..	60.31	61.01	

42. The season was peculiar, there were copious falls of rain during the months of July and August and in the early part of September, and it was not until about the 20th of that month that there was any pressing demand for canal water. From that time to the end of the season it became a question of the ability of the canal to supply water, which was eagerly clamoured for every where. New leases had to be refused, and the efforts of the establishment were directed to making the most of the water supply available; eventually the cultivators got quite out of hand and police constables were placed at the disposal of the Executive Engineer to assist in maintaining some kind of order. The

area watered may, perhaps, be looked on as the most the canal is capable of irrigating in seasons, when late in the year there is a sudden rush for water for lands, the irrigation of which has been postponed until the last moment. The Deputy Revenue Superintendent has been vested with the powers of a Magistrate, so as to admit of his dealing more promptly with the cases of the misappropriation of canal water. It is possible that some good may result from the measure, but when the crops are in danger of dying, the ordinary ryot will incur almost any risk to save them. Unfortunately water taken in defiance of authority is wasted as well as utilized, with the result that crops, which might be preserved if the water was carefully and economically used, perish.

It has several times been proposed, as the areas regularly leased have the first right to the water-supply available, not to grant permits after a fixed date, say the 1st of July, but this plan has the demerit of forcing the cultivators who have not made applications to use water without authority, if at all, and consequently to remove all restraints on the way it is applied. A considerable concession in the matter of water-rates is made to persons who lease for five years, and under present circumstances this appears to be the only method in which pressure can be brought on the ryots to irrigate their lands before the crops are in actual danger. The Superintending Engineer observes that—

"The lesson to be learnt from the experience of the season under report appears to be that the cultivators must be advised to complete their watering early and arrange to have their fields well filled before the end of September, and they must be made to understand that in October the supply is liable to fail, and water can only be given after long intervals in such cases. Unless timely precautions are taken to secure the fields before October, we cannot be responsible for subsequent failure of supply, and the remedy is entirely in their hands."

43. The duty of the water used, calculated on the average daily discharge for the whole irrigation season, was 208 acres per cubic foot per second for the area commanded by the Midnapore weir, and 81 acres for the area commanded by the Panchcoorah weir. In 1882-83 the respective duties similarly calculated were 144 and 85 acres per cubic foot.

44. The Superintending Engineer, at page 11 of his report, has given an interesting account of the irrigation from No. 4 or the Authra distributary, which commands 28,528 acres, and was designed to discharge 211 cubic feet per second.

The following summary is taken from the Superintending Engineer's report:—

"The total area irrigated was only 22,195 acres. The total area leased was 23,980 acres.

The total of the daily discharges for the season was 10,086 cubic feet per second, and the total of the areas irrigated amounted to 55,359 acres.

Each acre, therefore, received on the average  $\frac{55,359}{22,195} = 2\frac{1}{2}$  waterings of 4.3 inches in depth for this season.

The average daily discharge for the season was  $\frac{10,086}{10} = 1,008\frac{6}{10}$  cubic feet per second, which gives a duty of 358 acres per cubic foot of discharge.

The progress of the irrigation month by month may be thus stated:—

To END OF MONTH.	Acres leased.	AREAS IRRIGATED IN ACRES.					Total discharge of month.	Average daily discharge.	Duty per cubic foot.
		First watering.	Second watering.	Third watering.	Fourth watering.	Total.			
August ...	18,977	16,830	2,635	...	...	21,465	Cubic feet per second.	Cubic feet per second.	Acres.
September ...	18,325	8,601	8,911	2,825	...	11,905	2,014	106	146
October ...	21,709	2,543	6,406	8,832	38	16,393	2,644	93	171
November ...	23,980	217	1,667	1,313	2,861	6,107	769	23	279
Total ...		22,195	19,358	10,799	3,907	53,359			

45. The results show how dependent this system of canals is on assistance from rainfall. As pointed out by Colonel Gulliver, when the Sone Canal distributaries were being designed, it was never intended that the water-supply of a distributary should suffice to irrigate the area commanded independent of rainfall, in all years some assistance is certain, and the duty of the water is to secure a full crop by supplementing the natural irrigation so obtained with water from the river. The duty obtained must consequently vary, and will be the greatest

in those years in which there is a moderate rainfall only, combined with a demand for water in excess of the fall.

46. The arrears at the commencement of the year under the head water-rates amounted to Rs. 1,42,476, the current demand was Rs. 1,47,992, making a total of Rs. 2,90,468. Of this sum, Rs. 1,31,000 was collected, Rs. 14,777 remitted, and Rs. 1,44,691 remained as the balance unrealized on the 1st of April 1884. In addition, Rs. 12,228 were credited as miscellaneous revenue. The demand and recoveries for five years are shown in the table below, which includes miscellaneous revenue collected by civil officers:—

YEAR.	Amounts earned as water-rate during the year.	Total demand under all heads.	Cash received under all heads.	Remission.	Total.	Balance.	Cost of collection.	Percentage of cost on total demand.	Percentage of cost on recoveries.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.		
1879-80	1,51,537	1,59,854	1,41,033	688	1,42,270	57,584	15,016	7.81	10.89
1880-81	1,65,759	2,21,316	1,22,469	6,821	1,29,313	1,01,504	14,650	3.33	11.50
1881-82	1,11,690	2,71,001	1,29,529	2,638	1,32,167	1,39,914	37,172	6.73	18.25
1882-83	2,65,249	2,04,969	1,18,180	48,534	1,53,686	1,45,409	18,083	6.15	16.61
1883-84	1,40,941	2,10,573	1,43,224	14,534	1,58,128	1,32,411	15,537	5.96	12.97

47. It is satisfactory to note that out of the Rs. 1,43,228 realized during the year by the Deputy Superintendent, Rs. 1,12,182 was paid in voluntarily, and Rs. 31,046 only, recovered after legal proceedings had been commenced. A commencement has been made in enlisting the co-operation of the leading ryots in the matter by appointing them as headmen and remunerating them by a small commission. The Collector has been given the widest discretion in the matter, subject to a maximum charge of half-an-anna in the rupee on the total amounts realized during the year, and it is hoped that this system will gradually spread.

The amount collected as water-rates is in excess of any year to date, but it is not satisfactory to find that the arrear balance is constantly increasing. The matter is now having the attention of the Collector, and it is hoped that when once the irrecoverable balances of former years have been ascertained and remitted, the improvements which have been lately effected in the organization of the revenue establishment will bear fruits, and future years show a marked decline in these balances. The Commissioner states that—

“The tehsildars’ offices are reported to be in order, and when the kabulyat registers are completed, and they are reported to be all but complete, there is hardly any information which will not be available at a moment’s notice. Much, however, will depend on the amount of intelligent supervision exercised by the Deputy Superintendent over the proceedings of the tehsildars, and I hope Mr. Ghose will continue to show the zeal which characterized his administration during the year under report.”

This testimony is valuable as showing that a vigorous effort to correct previous deficiencies is being made, and as pointing out how much the work depends on the energy and industry of the responsible officers.

48. The new rules under Act III (B.C.) of 1876, which were adverted to in paragraph 41 of last year’s report, were under discussion throughout the year, but have been passed since its close; they are reprinted as an appendix to this report. They were very fully considered, and it is thought that they will help towards reducing the number of disputes and facilitate the work in various ways.

49. The usual crop experiments were carried out in 1,075 places, the results being very favourable to the irrigated crops, the produce of which was on an average 15.54 maunds more paddy and 20.42 maunds more straw per acre than these grown on unirrigated lands. The Commissioner remarks on this large difference, which he states is not explained either by the Executive Engineer or the Deputy Revenue Superintendent. There was, however, little or no rain during the month of October, and it is notorious that the crops which did not receive water suffered severely; this is probably a sufficient reason for the exceptionally great differences between the yield of paddy from irrigated and unirrigated lands. The experiments were conducted in the manner usual since 1873, and have frequently, notably in 1876 and 1881, showed little or no difference in favour of irrigation.

50. The total income credited during the year under the head “navigation” amounted to Rs. 1,20,586; of which Rs. 1,08,931 was received from tolls on boats, Rs. 11,649 being the amount paid by the Calcutta Steam Navigation Company, “Limited,” as hire of steamers and compounded tolls.

51. The following tables which embrace ten years give some particulars regarding the traffic :—

CANAL TRAFFIC.

DESCRIPTION.	1874-75.	1875-76.	1876-77.	1877-78.	1878-79.	1879-80.	1880-81.	1881-82.	1882-83.	1883-84.
Mills opened at end of year	No. 48	48	48	48	48	48	48	48	48	48
Toll collections	Rs. 44,888	51,918	67,651	1,06,912	37,860	31,661	77,143	66,480	1,04,127	1,09,231
Rate of tolls per mile	No. 555	1,076	1,408	3,227	1,611	1,913	1,607	2,968	3,211	3,806
Boats including empty	No. 28,967	36,432	41,372	52,221	46,224	52,044	66,461	61,469	65,666	72,009
Measurement tonnage of boats, including empty	Tons. 143,090	189,336	238,912	300,968	230,468	220,327	262,442	233,326	269,978	322,079
Passengers carried	No. 1,11,23,449	1,45,447	1,81,071	1,86,913	1,86,008	1,86,294	1,68,286	202,082	181,251	170,745
Estimated value of cargo	Rs. 1,11,23,449	1,45,447	1,81,071	1,86,913	1,86,008	1,86,294	1,68,286	202,082	1,81,251	1,70,745

CLASSIFICATION OF TRAFFIC.

CLASS OF GOODS.	1874-75.	1875-76.	1876-77.	1877-78.	1878-79.	1879-80.	1880-81.	1881-82.	1882-83.	1883-84.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Articles of food	61,407	69,425	114,336	201,256	106,378	118,440	96,948	137,137	177,231	180,188
Stimulants	4,327	9,224	10,519	18,199	14,763	15,012	14,806	25,639	4,635	4,871
Clothing	7,328	8,505	6,801	8,893	8,920	10,223	10,390	10,315	3,423	2,908
Staples of manufacture	14,760	20,372	19,369	19,104	24,942	26,040	31,023	24,534	11,294	24,003
Building materials	7,240	11,140	18,910	10,323	26,269	26,388	29,852	31,312	27,633	17,163
Fuel	5,990	4,207	8,142	8,652	11,268	10,212	13,425	14,534	13,670	5,305
Cooking utensils	1,786	2,134	2,782	3,877	4,810	5,031	4,576	4,548	5,423	.....
Miscellaneous	66,290	67,021	67,372	70,213	70,519	94,737	30,205	64,978	117,647	212,117

52. The first reach of the Midnapore canal and the Narainghur navigable distributary were closed for silt clearance from the 14th of February to the 6th of March. The Baramullah and Goalsamah locks were closed from the 25th February to the 7th of March, and from the 15th to the 25th of that month to allow of the valves being repaired, thus interrupting the through traffic. A set of diving apparatus have been procured, and it is hoped that small repairs will in future be carried out without closing the canal. A project for supplying the Ooloberiah reach with water from the Eden canal is under consideration, and, if carried out, may perhaps admit of all silt clearance being effected by dredgers. At present this cannot be done.

53. The steamer service between Calcutta and Midnapore, formerly worked by Government, was in the hands of a private company, and the Superintending Engineer states that it has given general satisfaction, any suggestions towards securing the safety of the passengers being willingly adopted. There were two lines of steamers belonging to different owners plying on the canal, and it is noted that nine steamers and flats are being built for the service.

54. The table below shows the number of passengers and weight of goods carried monthly by the Calcutta Steam Navigation Company, "Limited," to whom the steamers belonging to Government have been hired :—

MONTH.		PASSENGERS.				Goods.
		First class.	Second class.	Third class.	Total number.	
1883.						Mds. Srs.
April	...	26	99	11,420	11,545	347 13
May	...	17	162	10,331	10,511	
June	...	18	241	11,167	11,421	297 11
July	...	32	254	11,255	11,541	319 6
August	...	25	276	11,095	11,396	329 14
September	...	17	232	10,327	10,586	198 4
October	...	24	398	10,572	10,994	280 3
November	...	19	265	10,193	10,487	227 14
December	...	69	441	10,142	10,652	472 37
						362 81
1884.						
January	...	78	545	11,568	12,176	200 20
February	...	64	580	15,114	15,738	164 34
March	...	86	519	23,856	24,461	352 32
Total number		471	3,982	146,947	1,51,400	3,583 21
Total for 1883-83		441	1,507	145,841	1,47,789	374 5

56. Generally there has been a slight increase in the traffic on the Midnapore canal during the year, resulting in the tolls received being Rs. 2,990 in excess of the previous year's receipts, notwithstanding a slight reduction in the tolls levied the surcharge of quarter pie per head per mile formerly levied on passengers having been abolished from the 1st December 1883.

56. The realizations under the head "miscellaneous" amounted to Rs. 12,996, of which Rs. 788 was received by the Executive Engineer, and the balance collected by the Deputy Revenue Superintendent.

57. The following tables show the receipts on revenue account and working expenses for the last ten years:—

## REVENUE RECEIPTS.

Year.	Water-rates.	Navigation.	Miscellaneous.	Total.
	Rs.	Rs.	Rs.	Rs.
1874-75	67,015	44,886	4,316	1,16,217
1875-76	52,791	51,810	6,508	1,11,109
1876-77	61,460	67,651	7,876	1,36,987
1877-78	53,483	1,06,917	9,693	1,70,093
1878-79	85,014	77,340	8,356	1,70,710
1879-80	1,30,140	1,05,518	11,567	2,47,225
1880-81	1,12,960	93,099	10,407	2,16,466
1881-82	1,18,588	1,20,706	10,780	2,50,074
1882-83	1,04,060	1,46,922	17,028	2,68,010
1883-84	1,31,000	1,30,580	12,996	2,81,576

## WORKING EXPENSES.

	1874-75.	1875-76.	1876-77.	1877-78.	1878-79.	1879-80.	1880-81.	1881-82.	1882-83.	1883-84.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
<b>Maintenance.</b>										
Works and repairs	91,155	1,13,221	1,00,500	1,41,334	1,06,211	84,498	1,21,007	1,38,114	1,40,007	1,27,433
Establishment	18,422	25,306	27,002	35,000	18,513	28,163	20,100	31,022	21,218	29,341
Tools and plant	714	4,154	9,716	0,117	13,083	17,836	17,075	33,442	21,344	31,229
Grants	...	...	...	17	...	...	...	...	...	44
Compensation	...	...	...	...	...	...	...	...	...	80
<b>Total maintenance</b>	<b>1,12,526</b>	<b>1,43,787</b>	<b>1,46,558</b>	<b>1,86,474</b>	<b>1,55,807</b>	<b>1,39,590</b>	<b>1,88,192</b>	<b>2,02,584</b>	<b>2,02,589</b>	<b>1,88,078</b>
Irrigation establishment	71,000	16,421	17,342	15,129	14,801	15,777	16,101	16,871	20,237	19,903
Navigation ditto	7,097	7,119	7,149	7,151	7,227	7,340	7,437	7,319	14,101	7,511
<b>Total revenue management</b>	<b>18,700</b>	<b>23,612</b>	<b>24,704</b>	<b>23,340</b>	<b>22,029</b>	<b>23,117</b>	<b>23,538</b>	<b>24,190</b>	<b>34,338</b>	<b>27,414</b>
<b>Total working expenses</b>	<b>1,30,497</b>	<b>1,67,509</b>	<b>1,71,579</b>	<b>2,08,614</b>	<b>1,78,636</b>	<b>1,64,603</b>	<b>1,89,220</b>	<b>2,26,674</b>	<b>2,36,927</b>	<b>2,15,492</b>

The above table does not include indirect charges, which for the year amounted to Rs. 7,940, the net revenue derived from the canal being Rs. 40,990 against Rs. 21,508, received in the year preceding. It will be noticed that the decrease in the gross receipts is due to the transport service being no longer maintained by Government, and there is a corresponding reduction in the working expenses.

58. The cost of maintaining the canal and distributaries for the last five years is given in the table below:—

Year.	Main Canal.			Distributaries.		
	Length of canal.	Total cost of works.	Rate per mile.	Length of distributary channels.	Total cost of works.	Rate per mile.
		Rs.	Rs.		Rs.	Rs.
1879-80	65	56,648	1,180	244	16,123	66
1880-81	65	90,095	1,387	267	20,140	76
1881-82	65	1,03,910	2,104	277	11,484	41
1882-83	65	1,01,821	2,121	277	20,007	73
1883-84	65	1,06,435	2,315	277	21,103	76

The tendency to increase shown in these charges is unsatisfactory; so far as the main canal is concerned the reason given, the greater quantity of silt dredged, is fairly adequate; but it should be possible to maintain the distributaries at nearly the same rate as is found to be sufficient in Orissa. This was pointed out last year, and the absolute necessity of exercising greater economy in the matter will again be impressed on the local officers.

59. The question of dredging on this canal is yearly increasing in importance. There is a daily service of steamers between Midnapore and Calcutta and *vice versa*, by which the mails are conveyed, and daily or bi-weekly steamers to other places; any closure of the canal causes accordingly much public inconvenience and numerous complaints. Great attention has accordingly been directed towards improving the outturn from the dredgers and to keeping them constantly employed. The results have been satisfactory. The work done during the year has increased from 26 to 44 lacs, and the cost per thousand cubic feet has been reduced from Rs. 13.7 per 1,000 cubic feet to Rs. 10.57 per 1,000 cubic feet. The number of days working has been 1,593 against 1,405 in 1882-83.

60. The following table extracted from the Superintending Engineer's report gives particulars regarding the working of each dredger during the year:—

NAMES OF DREDGERS.	NUMBER OF DAYS AT WORK.		QUANTITY OF WORK DONE.				COST OF WORKING DREDGER DURING THE YEAR.		RATE PER 1,000 CUBIC FEET.	
	1883-83.	1883-84.	Per day.		During the year.		1883-83.	1883-84.	1883-83.	1883-84.
			1882-83.	1883-84.	1882-83.	1883-84.				
			C. ft.	C. ft.	C. ft.	C. ft.	Rs.	Rs.	Rs.	Rs.
"Hector" Rocket ...	240	210	2,390	3,134	215,410	677,450	8,853	8,785	34	30.7
"Ajax" Hydraulic ...	213	234	3,990	6,253	829,810	1,512,700	13,460	9,846	63	41
"Atlas" Hydraulic ...	181	219	4,036	7,043	665,230	1,645,300	4,091	3,000	22.8	13.4
"Combination" Potrero's	217	231	1,436	1,577	36,000	401,000	18,516	27,700	85.4	118.4
Harbour Dredger No. I ...	201	00	226	242	47,335	14,516	6,370	8,797	31.9	60.4
Ditto No. II ...	203	129	194	301	30,500	37,700				
Ditto No. III ...		166		221		47,623				
Ditto No. IV ...	173	204	204	173	55,250	40,000				
Ordinary and steam hopper and mud barrow							5,386	7,073		
Steam-launch "Kohaduck"							2,850			
Ditto "Cool"										
Ditto "Sir Arthur"								215		
Cotton										
Total	1,405	1,503	1,009	2,813	2,692,935	4,477,341	80,810	47,861	13.7	10.57

N.B.—Dredger Hector was under repairs from 28th January to 31st March 1884.

61. A new dredger has been procured from England since the close of the year, and more barges are being constructed.

### HIDGELLIE TIDAL CANAL

62. The capital, interest, and revenue accounts are given below:—

#### 1.—CAPITAL ACCOUNT.

HEADS OF ACCOUNT.	Outlay during 1883-84.	Outlay to end of 18 3-84.
<b>DIRECT CHARGES</b>	Rs.	Rs.
I.—Works	.....	12,66,239
II.—Establishment	.....	4,49,790
III.—Tools and plant	.....	57,586
IV.—Suspense account	.....	.....
Total outlay	.....	17,73,614
V.—Less receipt on capital account	.....	915
Net total	.....	17,72,699
<b>INDIRECT CHARGES.</b>		
Capitalization of abatement of land revenue	.....	11,210
Loss by exchange	.....	20,671
Leave and pension allowance	.....	33,597
Total	.....	65,378

#### 2.—INTEREST ACCOUNT.

	Rs.
Interest charges to end of 1882-83	9,87,614
Ditto ditto for 1883-84	70,903
Total to end of 1883-84	10,58,526



## 3.—REVENUE ACCOUNT—(ACTUALS).

	EXPENDITURE.			RECEIPTS.	
	During 1883-84.	To end of 1883-84.		During 1883-84.	To end of 1883-84.
<i>I.—Works and repairs.</i>	<i>Ra.</i>	<i>Ra.</i>		<i>Ra.</i>	<i>Ra.</i>
Works (extensions and improvements) ..	.....	3,033	Water-rate ..	.....	2,611
Maintenance and repairs ..	32,904	2,98,819	Navigation ..	62,317	5,63,890
Establishment ..	7,588	69,194	Miscellaneous ..	1,273	11,728
Tools and plant ..	2,784	11,527			
Total works and repairs.	43,366	3,82,573			
<i>II.—Revenue management.</i>					
Navigation establishment ..	3,215	37,125			
Total working expenses	46,581	4,19,698			
Profit ..	17,009	1,58,531			
Total ..	63,590	5,78,229	Total ..	63,590	5,78,229

63. This canal is wholly intended for navigation, and its revenues are entirely dependent on the tolls levied on boats, the receipts from which during the year amounted to Ra. 62,317, or Ra. 18,623 more than in 1882-83. The canal was re-opened on the 15th of April 1883, after a closure extending over three months for silt clearance.

64. Particulars regarding the traffic for the last ten years are given in the tables following:—

## COMPARISON OF TRAFFIC.

PARTICULARS.	1874-75.	1875-76.	1876-77.	1877-78.	1878-79.	1879-80.	1880-81.	1881-82.	1882-83.	1883-84.
Miles of canal open ..	29	29	29	29	29	29	29	29	29	29
Toll collections ..	52,200	22,640	44,673	60,971	52,723	44,913	53,334	45,645	43,084	63,817
Rate of toll per mile of canal ..	1,800'31	777'24	1,556'07	2,108'42	1,818'41	1,548'89	1,839'20	1,574'1	1,485'7	2,190'7
Number of boats ..	15,437	10,358	21,224	23,883	22,949	16,311	21,783	20,057	17,445	22,733
Tonnage of boats, exclusive of empties ..	1,31,500	69,003	1,31,432	1,55,483	1,64,488	1,20,021	1,52,781	1,22,020	1,52,891	1,98,787
Passenger carried ..	4,124	3,908	2,188	1,933	3,023	3,061	3,531	3,245	3,510	.....
Estimated value of traffic ..	23,76,309	15,30,440	19,02,042	31,50,503	41,55,353	25,86,051	33,34,731	31,10,565	33,55,244	36,42,309

## CLASSIFICATION OF GOODS.

PARTICULARS.	1874-75.	1875-76.	1876-77.	1877-78.	1878-79.	1879-80.	1880-81.	1881-82.	1882-83.	1883-84.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Articles of food ..	87,523	87,835	84,245	1,01,230	1,05,487	8,423	80,001	79,448	46,163	64,333
Stimulants ..	5,004	805	1,940	708	1,719	783	2,605	6,623	2,787	3,179
Clothing ..	305	46	140	117	344	03	423	1,305	5	590
Staples of manufacture ..	871	1,541	1,630	1,201	2,859	1,129	1,254	2,646	351	1,914
Building materials ..	3,143	3,752	8,078	6,818	8,801	23,444	18,908	2,401	746	1,792
Fuel ..	1,143	1,675	1,046	749	1,739	1,104	6,216	2,301	6,935	533
Cooking utensils ..	330	434	297	250	288	319	493	.....	189	119
Miscellaneous ..	25,099	22,004	24,107	27,321	42,773	23,744	30,540	37,990	1,306	6,123

65. There has, it will be noted, been an improvement in most of the items enumerated in the above table. The greater part of the traffic is at present towards Calcutta, the Superintending Engineer stating that out of a gross tonnage of 196,767 of all kinds of goods carried, 130,286 tons were consigned towards that place and the remainder 66,481, about one-third, took the opposite direction.

66. No material increase in the receipts from this canal is likely to occur until considerable improvements are carried out. An estimate providing for a new lock at Kalinuggur, dredging plant, and for deepening the canal so far as to provide a minimum depth of 6½ feet of water at low tides has been received, but

returned to the Superintending Engineer for revision. The matter is of considerable importance at present, as it is probable that this canal, which has for many years yielded a small surplus over working expenses, would pay interest on capital if the long and frequent closures for silt clearance could be avoided. When the Orissa coast canal, of which the Hidgelee tidal canal forms the first part, is opened, the need for its remodelling so as to bring it up to the standard of the remainder will become urgent. As last year remarked, the present Kalinugger lock is 100 feet long, whilst all the remaining locks on this as well as those on the Orissa coast canal are 150 feet in length.

67. The tables below shew the receipts and working expenses of this canal for the last ten years:—

REVENUE RECEIPTS.

YEAR	Water-rates.	Navigation.	Miscellaneous.	Total.
	Rs.	Rs.	Rs.	Rs.
1874-75	13	52,209	669	52,891
1875-76	.....	22,540	395	22,935
1876-77	.....	44,572	464	45,036
1877-78	.....	60,971	1,309	62,280
1878-79	.....	69,723	1,070	70,793
1879-80	.....	44,918	863	45,781
1880-81	.....	53,338	1,149	54,487
1881-82	.....	45,848	1,446	47,294
1882-83	.....	43,694	1,338	45,032
1883-84	.....	62,317	1,273	63,590

WORKING EXPENSES.

PARTICULARS.	1876-76.	1876-77.	1877-78.	1878-79.	1879-80.	1880-81.	1881-82.	1882-83.	1883-84.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Maintenance, works, and repairs	26,750	7,037	22,400	10,500	30,607	18,801	10,479	29,480	22,004
Establishments	3,033	1,793	2,408	3,904	5,794	2,830	4,407	5,778	7,554
Tools and plant	1,442	429	104	.....	.....	1,444	1,834	1,303	2,784
Total	36,431	9,939	24,912	14,404	36,401	23,034	16,720	36,561	32,342
Navigation establishment	2,007	2,571	2,408	2,727	3,838	3,046	2,839	2,973	3,213
Leave and pension allowances	.....	.....	.....	.....	.....	.....	1,305	1,357	1,512
Total working expenses	30,538	12,420	27,320	17,131	40,239	26,080	20,864	40,901	37,067

68. The net revenue of the canal was Rs. 15,497 against Rs. 3,135 in 1882-83; it was really considerably more, as Rs. 23,706 of the charge for maintenance was on account of silt clearance actually carried out in the previous year.

SONE CANALS.

69. The capital, interest, and revenue accounts of these canals are given below:—

I.—CAPITAL ACCOUNT.

HEADS OF ACCOUNT.	Outlay during 1883-84.	Outlay to end of 1883-84.
<b>DIRECT CHARGES.</b>	<b>Rs.</b>	<b>Rs.</b>
I.—Works	4,28,707	1,74,37,708
II.—Establishment	81,365	10,35,373
III.—Tools and plant	89,813	19,70,595
IV.—Suspense accounts	(—)9,078	2,13,260
<b>Total</b>	<b>5,90,807</b>	<b>2,45,56,941</b>
V.—Less receipts on capital account	592	3,00,751
<b>Net total</b>	<b>5,90,215</b>	<b>2,42,56,190</b>
<b>INDIRECT CHARGES.</b>		
Capitalization of abatement of land revenue	41	37,361
Loss by exchange	2,774	77,277
Leave and pension allowances	11,391	8,40,208
<b>Total indirect charges</b>	<b>14,206</b>	<b>9,54,846</b>

## II.—INTEREST ACCOUNT.

	Rs.
Interest charges to end of 1882-83 ... ..	83,07,908
Ditto for 1883-84 ... ..	9,58,443
Total interest charges to end of 1883-84 ... ..	92,66,351

## III.—REVENUE ACCOUNT (ACTUALS).

	EXPENDITURE			RECEIPTS	
	During 1883-84	To end of 1883-84		During 1883-84	To end of 1883-84
<i>I.—Maintenance and Repairs.</i>	Rs.	Rs.		Rs.	Rs.
Works ...	2,75,984	19,70,264	Water-rates ...	4,84,209	30,21,175
Compensation ...	351	2,449	Navigation ...	85,193	4,11,476
Establishment ...	63,477	5,17,160	Miscellaneous ...	84,405	2,65,355
Tools and plant ...	34,983	60,127			
Total Maintenance ...	3,74,795	25,50,000			
<i>II.—Revenue management.</i>					
Irrigation establishment ...	1,14,005	6,11,355			
Navigation establishment ...	20,248	95,495			
Total ...	1,34,253	7,06,840			
<i>III.—Refunds of Revenue</i> ...	5,429	12,603			
Total working expenses ...	5,14,477	32,69,443			
Profit ...	89,330	4,28,563			
Total ...	6,03,807	36,98,006	Total ...	6,03,807	36,98,006

70. The expenditure and earnings for the year 1883-84 are shewn in the statement following:—

EXPENDITURE			EARNINGS		
<i>I.—Maintenance and Repairs.</i>	Rs.			Rs.	
Works ...	2,75,984		Water-rates ...	7,42,311	
Compensation ...	351		Navigation ...	85,193	
Establishment ...	63,477		Miscellaneous ...	84,405	
Tools and plant ...	34,983				
Total Maintenance ...	3,74,795				
<i>II.—Revenue management.</i>					
Irrigation establishment ...	1,14,005				
Navigation ditto ...	20,248				
Total ...	1,34,253				
<i>III.—Refunds of Revenue.</i>	5,429				
Total working expenses ...	5,14,477				
Profit ...	3,47,432				
Total ...	8,61,909		Total ...	8,61,909	

71. The lengths of canal and distributaries open and areas commanded and which can be irrigated are shown in the table below:—

NAME OF CANAL.	Navigable canal.	Branch canal.	Distributaries.	Area under command.	AREA WHICH CAN BE IRRIGATED.		Total area which can be irrigated.
					Khurreef.	Rubbee.	
	Miles.	Miles.	Miles.	Acres.	Acres.	Acres.	Acres.
Eastern main and Patna canal ... ..	84½	.....	811	406,135	112,640	131,200	243,840
Arrah canal ... ..	74	71½	480	518,354	132,000	178,200	310,200
Western main and Buxar canal ... ..	187	77½	305	794,000	125,540	219,600	345,140
Total ... ..	310	148½	1,096	1,718,489	369,180	529,000	898,180

72. The area shown as commanded is the full extent over which water could be led from the canals, no deductions being made for village sites or waste land. Assuming that only 500 acres per square mile is cultivated, the area given will be reduced to 1,361,151 acres. The figures in the column "area which can be irrigated" are obtained by multiplying the full supply of the canals by 80, for the area which can be irrigated during the khurreef season, and 3,000 cubic feet which is taken as the supply available in average years during the rubbee season by 180 for the area then irrigable. Colonel Heywood considers that the duty on the khurreef season should be reduced to 70 acres per cubic foot, and he also says that on the 16th February 1884 the supply in the Sone river was 1,568 cubic feet per second only, which at the high duty of 180 acres per foot would suffice for the irrigation of 336,240 acres only. In dry years the area which could be irrigated reduced as suggested would be 792,240 acres.

The increase in length of distributaries during the year was 6½ miles, the fractional differences in the lengths of canals compared with last year are due to errors in former returns, 53 miles of new distributaries were in progress, but had not been completed at the close of the year.

73. The state of the circle as regards village channels is shown in the table following:—

	Total length of village channels completed.	Area commanded.	Total number of outlets.	Number of permanent outlets.
	Miles.	Acres.	No.	No.
Arrah Division ... ..	173	1,23,046	1,860	12
Buxar Division ... ..	733	1,34,418	2,623	303
Eastern Sone Division ... ..	455	84,767	1,342	92
Total 1883-84 ... ..	1,361	3,42,231	5,825	407
Total 1882-83 ... ..	1,186	2,45,308	4,950	248

Of these channels 134 miles were constructed by Government officers on applications made under Act III (B.C.) of 1876, and at the close of the year 34 miles were in progress.

74. The areas assessed with water-rates during the year and that preceding are given in the table below:—

CROP.	1882-83.	1883-84.	Increase.	Decrease.
	Acres.	Acres.	Acres.	Acres.
Khurreef ... ..	65,514	134,732	69,218	.....
Rubbee ... ..	15,999	99,304	83,305	.....
Sugarcane ... ..	15,275	6,732	.....	8,543
Hot-weather irrigation ... ..	2,481	8,524	6,043	.....
Five years' lease ... ..	74,555	101,322	26,767	.....
Total ... ..	173,824	350,614	185,333	8,543
Total increase ... ..	.....	176,790	.....	.....

75. The area irrigated was more than double that watered in 1882-83, and in excess of any year to date. Dividing the area under five years' lease as

suggested by the Superintending Engineer, the figures below shew the acreage compared with the maximum areas irrigated in previous years—

	1883-84.	Acres.	Acres.
Khureef	...	215,790	134,208 in 1877-78.
Rubbee	...	109,438	124,818 in 1880-81.
Sugarcane and hot-weather crops	...	25,388	46,909 in 1881-82.

76. By divisions the areas irrigated in each of the last three years is shewn in the table below:—

Year.	EASTERN SOON DIVISION.					ARRAH DIVISION.					BULAR DIVISION.					TOTAL FOR ALL DIVISIONS.					
	Khurif.	Rabbee.	Sugarcane.	Five years' mean.	Hot-weather.	Khurif.	Rabbee.	Sugarcane.	Five years' mean.	Hot-weather.	Khurif.	Rabbee.	Sugarcane.	Five years' mean.	Hot-weather.	Khurif.	Rabbee.	Sugarcane.	Five years' mean.	Hot-weather.	Grand total.
1880-81 ..	17,610	10,876	1,775	.....	.....	74,837	31,700	15,807	.....	.....	43,161	8,138	5,453	.....	.....	134,208	50,290	33,127	.....	.....	297,625
1881-82 ..	12,350	7,004	701	0.65	2.295	20,138	21,017	14,403	23,542	12,184	10,966	7,874	6,734	2,409	6,530	85,875	46,792	21,891	43,340	20,714	178,075
1882-83 ..	13,601	2,020	1,436	11.18	2.421	24,182	8,002	2,900	25,090	.....	21,681	1,873	5,933	10,389	.....	66,514	15,890	15,776	71,533	3,461	173,824
1883-84 ..	28,769	7,361	59	18.62	91	53,511	45,002	3,195	60,372	7,776	52,638	40,061	3,479	26,330	664	134,733	40,304	6,752	101,522	6,521	330,614

77. The extension of irrigation was due to a serious deficiency in the rainfall of August and October. The following table of rainfall and extract from the Superintending Engineer's report, comparing the year 1883 with the years 1873, 1875, and 1877, shows the extreme value of canal irrigation in such seasons:—

MONTH.	1873.			1875.			1877.			1883.		
	Patna.	Arrah.	Buxar.	Patna.	Arrah.	Buxar.	Patna.	Arrah.	Buxar.	Patna.	Arrah.	Buxar.
August	11.78	10.76	8.10	8.37	12.32	17.07	7.20	3.74	3.03	7.53	5.43	5.40
September	0.94	2.42	1.00	2.36	2.39	4.51	2.79	1.78	1.64	5.01	4.06	0.47
October	0.90	0.00	0.00	0.93	0.00	0.32	0.13	2.70	3.02	0.40	0.53	1.03
Total	12.72	13.18	9.10	13.76	14.71	22.90	10.13	7.22	7.69	13.04	10.46	12.90

In 1873, the whole rice crop died off in Shahabad;

„ 1875, the appearance of the crops was nearly as bad as in 1873;

„ 1877, the transplanting of the late rice was never effected over large areas, and

„ 1883, the rice crop died extensively where irrigation either from canals or ahars was not available.

It is quite clear, taking the following averages of the four years:—

12.36 inches at	...	...	...	Patna
11.66 „	...	...	...	Arrah
13.33 „	...	...	...	Buxar

that the rainfall in 1883 was not sufficient by itself, as was found to be the case, to allow of the maturing of the late rice.”

78. The statements below give the rainfall for each division separately for both the khurif and rubbee seasons, the figures are the average of observations at the head-quarters of each canal sub-division:—

#### KHUREEF SEASON

MONTH.	EASTERN SOON DIVISION.				ARRAH DIVISION.				BUJAR DIVISION.			
	1880-81.	1881-82.	1882-83.	1883-84.	1880-81.	1881-82.	1882-83.	1883-84.	1880-81.	1881-82.	1882-83.	1883-84.
August	15.39	13.49	9.84	8.95	14.83	11.57	9.00	5.43	7.93	14.28	7.41	2.37
September	2.24	4.55	4.83	4.23	3.00	4.13	4.38	4.04	2.23	2.72	5.77	5.47
October	4.91	2.87	4.47	0.99	4.14	6.78	4.99	0.53	3.57	5.31	4.00	0.81
Total	22.54	21.91	19.14	14.17	22.96	22.47	18.37	10.04	13.73	22.31	17.17	9.65

#### RUBBEE SEASON

MONTH.	EASTERN SOON DIVISION.				ARRAH DIVISION.				BUJAR DIVISION.			
	1880-81.	1881-82.	1882-83.	1883-84.	1880-81.	1881-82.	1882-83.	1883-84.	1880-81.	1881-82.	1882-83.	1883-84.
October	4.91	3.87	4.47	0.99	4.14	6.78	4.99	0.53	3.57	5.31	4.00	0.81
November	0.12	0.00	1.27	0.00	0.00	0.00	1.77	0.00	0.00	0.00	1.88	0.00
December	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	5.03	3.87	5.74	0.99	4.14	6.78	6.77	0.53	3.57	5.31	5.88	0.81

79. The area irrigated during the khureef season was measured by the powers of the canal to supply water, and unfortunately this difficulty was intensified by the occurrence of a breach in the main western canal on the 23rd August, which caused a complete stoppage of supply for nine days. The consequence was that the crops towards the tails of the distributaries suffered severely for want of water. The cause of the breach has never been satisfactorily ascertained, but a regulator has since been built at the bifurcation of the Arrah and main western canals, and the whole system can never again be paralyzed by a breach in one canal.

The effect of the breach on the revenues of the year was disastrous, wholesale applications for remission being made, which will be further adverted on under that head.

80. The usual statement showing the crops irrigated follows:—

NAME OF CROP.	EASTERN SONE DIVISION.		ARRAH DIVISION.		BUXAR DIVISION.		TOTAL.	
	1882-83.	1883-84.	1882-83.	1883-84.	1882-83.	1883-84.	1882-83.	1883-84.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
Rice	15,091	23,091	27,350	22,768	11,283	52,094	61,628	103,861
Indigo	...	...	311	168	...	0	321	174
Garden	...	...	1	4	...	...	1	4
Khadoi	...	104	334	553	179	338	563	1,093
Hot-weather	2,451	102	...	7,778	...	654	2,451	8,524
Sugarcane	1,436	58	7,050	3,190	3,908	3,479	15,273	4,732
Rubbee	1,407	0,407	7,612	43,556	5,811	42,320	14,220	57,832
Garden	7	8	1	7	0	30	14	45
Upland	558	786	549	819	154	109	1,042	1,407
Five years' leases	21,180	16,680	53,030	50,373	10,339	26,330	74,550	121,523
Total	32,770	54,900	97,130	103,936	43,924	131,876	178,824	350,614

Five years' leases ... { Rice ... 81,054  
Rubbee ... 10,182  
Sugarcane ... 10,132 } Approximately.

The area leased was 260,187 acres, the excess being areas either irrigated in excess of, or without permit.

From the table below it will be seen that the leases are only a rough guide as to the areas actually watered, except in the case of five years' leases:—

	ACRES IN 1879-80.		ACRES IN 1880-81.		ACRES IN 1881-82.		ACRES IN 1882-83.		ACRES IN 1883-84.	
	Irrigated.	Leased.	Irrigated.	Leased.	Irrigated.	Leased.	Irrigated.	Leased.	Irrigated.	Leased.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
Annual khureef	41,132	23,104	134,204	108,750	55,353	43,000	65,614	40,240	134,733	83,479
" rubbee	32,200	24,281	54,200	28,000	80,706	10,070	15,000	10,470	29,301	8,125
" sugarcane	27,158	16,088	23,127	23,300	21,801	13,448	13,271	8,157	6,732	7,908
Five-year leases	...	...	...	...	43,242	62,810	74,553	72,305	101,322	102,210
Hot-weather	...	...	...	...	20,704	...	5,481	1,343	5,024	7,025
Total	130,550	90,554	207,023	167,044	176,075	120,544	173,824	146,538	260,614	200,187

The most satisfactory feature of the large increase in irrigation is the extension of the area under agreement for five years.

The proportion of flow to lift irrigation was 90 to 10, as against 95 to 5 in 1882-83.

81. The Superintending Engineer gives the duty of the water utilised as follows:—

	Khureef.	Rubbee.
Eastern Sone division	60	53
Arrah division	94	73
Buxar "	97	91

The whole area under irrigation during the year was 350,614 acres. Of this 8,524 acres were hot-weather crops, and must be eliminated, taking  $\frac{1}{4}$ ths of the five-year leases as khureef and the remainder  $\frac{3}{4}$ th as rubbee and the 6,732 acres sugarcane in both crops, the area under irrigation in the khureef season was 222,522 acres and in the rubbee season 126,300 acres. The average discharge entering the two main canals for the four months July to October,

was 3,031 cubic feet per second, and in the five months, November to March, 1,924 cubic feet per second, the duty taking the figures on the water entering the canals was therefore  $73\frac{1}{2}$  acres per cubic foot in the khureef and  $65\frac{1}{2}$  acres per cubic foot in rubbee season. In one selected distributary, the Bhojepore, the duty is given as 88 acres per cubic foot in the khureef and 103 acres per cubic foot in the rubbee season.

82. At the commencement of the year there was a balance of Rs. 3,11,065 due on account of water-rates, and the assessments of the year amounted to Rs. 7,42,311, making a total of Rs. 10,53,976. Of this sum Rs. 4,84,209 was collected, and Rs. 1,45,974 remitted, a balance of Rs. 4,23,793 remaining due at the end of the year. The heavy remissions were mainly owing to irrecoverable balances of former years being written off, but the breach on the canal, mentioned in paragraph 80, also, necessitated heavy remissions, and the increase on the arrear balance is chiefly owing to attempts to avoid payment on the ground of the non-supply of water during the nine days on which the canal was wholly closed. The accident was most unfortunate: there was a heavy demand for water at the time, and there is no doubt that the crops on lands supplied from the tails of the distributaries suffered severely, as they had not received any share in the watering in progress, and before the water again became available the crops had been damaged. The area so affected was, however, limited compared with that injured by the want of rain in October.

83. Of the remissions Rs. 83,946 were on account of the assessments of the year 1883-84, and the balance Rs. 62,028 from the demand of former years. The amount remitted is further divisible into Rs. 52,392 written off as irrecoverable by orders of the civil officers, and Rs. 93,582 remitted for causes affecting the assessment.

The amounts written off as irrecoverable are mostly balances of years anterior to 1882-83, which it was found for various reasons to be impossible to collect. The remissions made by the Engineers were very largely due to the breach in the main western canal, and do not include the whole loss caused by that accident, Rs. 16,226 having, in the Arrah division alone, been struck out of the demand statements before their despatch to the Collector.

84. The Superintending Engineer at page 3 of his report gives a full account of the proceedings of the local officers in consequence of the temporary failure of supply; but, as before observed, this was scarcely the main cause of the short crops, which was the late leasing of large areas already injured by drought, which could not be supplied with water in time to more than partially save the crops. As an illustration of this it may be noted that out of 78,116 acres of annual leases in the khureef season, no less than 47,853 acres were leased in the months of September and October after the occurrence of the breach.

The matter was personally investigated by Mr. Levinge, Chief Engineer, the result being that it was determined not to press for water-rates where the supply of water had not succeeded in saving the crops, and eventually the following orders were passed by the Lieutenant-Governor:—

"I.—No hot-weather water-rates will be charged.

"II.—The rate to be charged in villages where there are generally indifferent crops of rice will be for khureef Rs. 1-4 instead of Rs. 1-14 per bigha.

"The fact of there being indifferent crops to be determined on a consideration of—

1stly.—The water supply available during the time when there was the greatest demand.

2ndly.—On the actual produce as stored in the threshing floors.

3rdly.—On the khusrabs showing that in the village there are many fields in which the rice died.

"III.—No water-rates are to be charged on fields shown in the khusrabs as dead or (where the information has been noted) as unlikely to yield a crop exceeding 3 maunds per bigha.

"IV.—Where it can be shown that the rice crops in a village have been very bad, say not exceeding 3 maunds per bigha, generally no water-rates are to be charged."

85. As already mentioned, effective measures to prevent an accident, such as occurred in 1883-84, have been taken, but the gradual substitution of khureef for rubbee crops has rendered the canals unable to irrigate more than a proportion of the area for which water is required in seasons of drought.



86. A statement giving particulars of the demands and collections in the last five years follows:—

YEAR.	DEMAND.			Remission	Net demand.	Collection	Balance.	Percentage of collection to current demand.
	Arrears.	Current.	Total.					
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1879-80	3,04,111	4,69,200	7,73,311	10,617	7,62,694	4,44,718	5,18,578	68.7
1880-81	3,18,316	5,14,874	8,33,192	10,735	8,22,457	3,72,005	4,04,201	70.7
1881-82	4,04,261	4,99,730	9,04,000	85,281	8,18,719	1,60,500	4,30,839	60.9
1882-83	4,34,849	4,52,301	8,87,150	21,020	8,66,130	6,00,000	3,11,600	122.6
1883-84	3,11,665	7,42,311	10,54,976	1,65,974	8,89,002	4,80,200	4,23,703	83.8

87. The increase in the arrear balances is to be viewed with regret; but, as remarked by the Collector of Shahabad, "the circumstances attending the work of collection were of an unusually unfavourable nature, for which allowances have to be made." The Superintending Engineer agrees that the difficulties experienced were exceptional, as will be seen from the following extract from his report:—

"Notwithstanding these extensive remissions, a very large number of complaints of failure of crop were and are still being filed.

I am informed by the Special Deputy Collector that at the time of the promulgation of the Government order as to remission and when the ryots began to understand what those orders were, they very generally in this division at once stopped voluntary payments, and the collections which were going on satisfactorily received a sudden check.

The ryots received the impression that they would all get off any payment for khureef. They proceeded to file petitions, are still withholding payments, and in many instances are lodging appeals to the Collector against the decisions of the canal officers.

This withholding of payments and general filing of complaints is the most prominent in the Agraon sub-division, where there appears to be a combination of villagers against Government. While remaining silent at the time of measurement, many villages have now come forward in a body, and declare that not only did their annual lease crops die, but even those under five years' lease for which it is always the first care of the irrigation officers to secure a supply when demanded.

So far as investigation on these complaints has gone at present, the allegations of the ryots as to a general destruction of their irrigated crops are not borne out by the facts elicited.

But there are numerous appeals, the ryots employing clever mooktyars in Arrah who take every advantage afforded them by the law."

88. The balances in the various districts on the 1st of April 1883 and 1st April 1884 are shown below:—

	1st April 1883.	1st April 1884.
	Rs.	Rs.
Shahabad	2,55,652	3,16,806
Patna	28,872	66,524
Gya	27,741	40,463
Total	3,11,665	4,23,793

A special enquiry into the administration of the Sone canals partly with reference to these arrears is now in progress under orders contained in the Government of India's letter No. 1831, of date the 11th July 1884, forwarding a despatch on the subject.

89. The collections of the present year are up to the 1st of October Rs. 2,53,161 against Rs. 1,46,400 in 1882-83, so that the effect of the increase in irrigation on the receipts is now being felt.

90. The cost of the revenue establishment employed during the year and that preceding is shown in the table below:—

	1882-83.		1883-84.	
	Amount.	Percentage on collections.	Amount.	Percentage on collections.
	Rs.		Rs.	
Permanent and temporary establishments, such as zilladars, ameenas, &c.	35,034	6.19	42,106	8.69
Establishment employed under Collectors	41,971	7.40	41,724	8.62
Headmen's fees	28,878	5.10	30,175	6.21
Total	1,05,883	18.69	1,14,005	23.54

The figures for 1882-83 differ from those given in the revenue account for that year, as the headmen's fees paid by civil officers are now included in the item "establishment employed under Collectors." The higher cost of establishment is due to the increased area assessed, the water-rates on which are now in course of collection: on the area irrigated the cost of establishment was  $\frac{103,832}{178,421} =$  annas 9.75 per acre in 1882-83 and  $\frac{114,005}{226,014} =$  annas 5.20 per acre in 1883-84.

91. The usual tables giving the cost of measuring the crop and preparing the demand statement are appended, and it will be found on reference to last year's report that there has been a considerable reduction in the cost per acre:—

*Cost of measuring crops.*

DIVISION.	FIVE YEARS' LEASE.			SUGARCANE.			KHURRUP.			RUBBER.		
	Cost.	Area.	Rate per acre.	Cost.	Area.	Rate per acre.	Cost.	Area.	Rate per acre.	Cost.	Area.	Rate per acre.
	Rs. A. P.	Acres.	Rs. A. P.	Rs. A. P.	Acres.	Rs. A. P.	Rs. A. P.	Acres.	Rs. A. P.	Rs. A. P.	Acres.	Rs. A. P.
Eastern Bona	241 3 1	2,488	0 0 3'64	2 5 5	58	0 0 7'7	780 13 5	22,501	0 0 5'25	155 5 9	7,231	0 0 4'95
Arrah	743 6 0	4,620	0 0 5'07	800 0 0	10,578	0 0 10'14	2,000 0 0	83,511	0 0 7'26	3,309 0 0	43,032	0 0 6'10
Buxar	536 13 6	15,941	0 0 7'07	233 13 8	3,479	0 0 1'3	1,318 3 8	53,103	0 0 4'74	1,403 4 11	48,001	0 0 6'58

*Cost of preparing demand statements.*

DIVISION.	FIVE YEARS' LEASE.			SUGARCANE.			KHURRUP.			RUBBER.		
	Cost.	Area.	Rate per acre.	Cost.	Area.	Rate per acre.	Cost.	Area.	Rate per acre.	Cost.	Area.	Rate per acre.
	Rs. A. P.	Acres.	Rs. A. P.	Rs. A. P.	Acres.	Rs. A. P.	Rs. A. P.	Acres.	Rs. A. P.	Rs. A. P.	Acres.	Rs. A. P.
Eastern Bona	212 9 1	2,488	0 0 5'04	3 13 8	58	0 1 0'78	1,802 10 0	22,501	0 0 8'00	254 6 2	7,231	0 0 6'73
Arrah	399 6 0	4,620	0 1 9'18	1,236 0 0	10,578	0 1 16'77	8,910 0 0	83,511	0 1 2'05	4,013 0 0	43,032	0 1 5'30
Buxar	536 13 6	15,941	0 0 7'07	233 13 8	3,479	0 1 36'1	1,403 4 11	53,103	0 0 5'00	1,318 3 8	48,001	0 0 5'16

92. The attendance of the patwaris at the measurements is still unsatisfactory, but since the close of the year canal officers have been vested with the powers of a Collector under section 35 of Regulation VII of 1822, and it is hoped that this will prove of considerable assistance in securing their attendance. The Collector of Shahabad, nevertheless, still considers that a change in the law will be necessary, observing that "the difficulty of making them do the work assigned to them by the Irrigation Act remains the same as before." It is clear, however, that much can be done by good personal management, as the percentage of attendance on the villages measured was 97.7 per cent. in the Ramnugger sub-division and 86.0 per cent. in the Nasriganje sub-division, against a general average of 71 per cent.

93. The number of complaints is a subject that is now engaging attention. No less than 9,364 applications for remission were disposed of during the year. The point which gives most trouble is the tendency to delay in making objections, until all trace of irrigation has passed away, and then to allege that no intimation that water-rates were due had been received. Revised instructions for canal officers have lately been issued, which give increased facilities for disposing of such claims at the time of measurement, and an effort will be made to insist more strictly on the observance of the rule requiring that complaint shall be made within a month of the demand being made. But it has been held that the demand alluded to in the rule is that made by the Collector, probably months after the irrigation is over, and the date of which is quite unknown to the canal officer who disposes of the objection. On the other hand, the demand statements for various causes, disputes about irrigation, difficulties in ascertaining the names of cultivators, &c., are themselves frequently late, and the Collector cannot make the demand as promptly as he otherwise would. The khareef demand statements are due in the Collector's office on the 15th of December, whilst in October not only is new irrigation in progress, but in seasons of scarcity the canal officer's unceasing attention is devoted to the regulation of the water-supply, so that the most may be made of what is available, and that

it may not be run to waste or be used in filling *aharas*. The increase from 74,555 acres to 101,322 acres in the five-years' leases will do something towards improving matters, as the difficulties mentioned above, with the exception of changes of names, disappear in respect to lands so leased.

94. The orders regarding crop experiments have not been completely carried out during the year, none being returned from two of the sub-divisions of the Arrah division: the average of the rice experiments gives  $3\frac{3}{4}$  maunds of rice and  $6\frac{3}{4}$  maunds of straw as the excess produce of lands irrigated by the canal.

95. The revenue under the head "Navigation," since the opening of the canals, is shown below:—

YEAR.	EASTERN MAIN SERIES.			WESTERN MAIN SERIES.			Total.	Total (tollage only).
	Number of miles open.	Tollage receipts.	Transport service receipts.	Number of miles open.	Tollage receipts.	Transport service receipts.		
		Rs.	Rs.		Rs.	Rs.	Rs.	Rs.
1870-77	...	...	...	...	4,952	...	4,952	4,952
1877-78	...	861	9,401	...	17,375	...	25,774	25,774
1878-79	...	861	18,570	...	20,732	...	29,332	29,332
1879-80	...	861	14,112	...	13,492	7,209	29,450	27,659
1880-81	...	861	27,337	...	12,482	12,814	31,143	29,310
1881-82	...	861	21,100	...	24,044	27,041	35,110	34,142
1882-83	...	861	22,079	...	10,035	15,705	31,305	29,304
1883-84	...	861	22,003	...	20,000	30,000	34,103	33,632

96. In the following table the tollage assessments are divided under the heads "Government" and "Private":—

YEAR.	EASTERN MAIN AND PATNA CANALS.			WESTERN MAIN CANAL.			ARRAH CANAL.			BUXAR CANAL.			TOTAL.		
	Private tolls.	Government tolls.	Total.	Private tolls.	Government tolls.	Total.	Private tolls.	Government tolls.	Total.	Private tolls.	Government tolls.	Total.	Private tolls.	Government tolls.	Total.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1877-78	2,778	7,083	9,861	1,104	2,711	3,815	7,172	5,440	12,614	...	...	...	11,146	18,224	29,370
1878-79	15,762	4,911	20,673	1,004	1,169	2,173	2,424	7,134	...	...	...	...	21,400	7,400	28,800
1879-80	13,565	813	14,378	1,417	1,507	2,924	10,767	1,132	11,900	...	...	...	25,750	1,800	27,550
1880-81	20,520	942	21,462	2,247	210	2,457	6,397	1,394	7,791	...	...	...	30,000	2,000	32,000
1881-82	27,377	1,740	29,117	2,200	2,166	4,366	13,370	524	13,894	3,117	1,000	4,117	44,874	5,400	50,274
1882-83	24,167	625	24,792	1,400	1,139	2,539	10,000	254	10,254	2,000	402	2,402	30,500	2,000	32,500
1883-84	21,000	800	21,800	1,000	2,701	3,701	16,000	1,000	17,000	6,400	117	6,517	35,300	2,200	37,500

97. The small decrease in the tolls received on account of boats using the Eastern main and Patna canals is due to the long closure, which extended from the 11th of April to the 30th of June, whilst the increase on the Western main series is owing to there having been only a short closure, from the 6th to the 16th of April.

98. Further particulars comparing the traffic for the last five years and the description of goods carried, are given in the tables below:—

	1870-80.	1880-81.	1881-82.	1882-83.	1883-84.
Number of miles open at the end of the year. ... Miles.	1621	2167	2167	2182	219
Toll collections ... Rs.	27,804	39,819	54,143	39,304	48,032
Rate of toll per mile ... "	151	183	249	180	217
Boats, including empties ... No.	6,942	7,482	10,086	7,616	8,822
Measured tonnage of boats, including empties ... Tons.	66,286	69,537	1,12,971	78,951	95,472
Estimated value of cargo ... Rs.	34,82,626	33,73,946	34,63,586	37,90,467	52,54,476

## Description of goods carried—

		1879-80.	1880-81.	1881-82.	1882-83.	1883-84.
		Tollage.	Tollage.	Tollage.	Tollage.	Tollage.
		Rs.	Rs.	Rs.	Rs.	Rs.
Articles of food	...	8,402	8,236	15,838	9,634	14,951
Stimulants	...	793	1,048	1,853	2,010	1,889
Clothing	...	214	279	111	81	40
Staples of manufacture	...	4,257	3,495	11,320	9,456	11,712
Building materials	...	2,346	2,969	2,838	2,187	2,542
Live-stock	...	.....	.....	.....	.....	.....
Fuel	...	171	153	276	197	388
Cooking utensils and other domestic implements	...	53	.....	.....	.....	550
Bamboos and buliahs	...	9,503	3,291	8,681	6,077	6,565
Miscellaneous	...					
			10,849	8,261	6,948	6,599

99. No information regarding the upward or downward traffic is given by the Superintending Engineer, but the following table, extracted from his report, is useful as showing the position of the trade centres :—

Division.	Toll station.	Receipts.			REMARKS.
		1881-82.	1882-83.	1883-84.	
		Rs.	Rs.	Rs.	
Eastern Sone Division.	Baroon	14,211	11,852	11,769	On the Sone at the head. A large village on the Sone.
	Paoodnagar	4,173	2,351	2,388	
	Arwal	1,743	1,325	769	At the railway near Dinapore. At the end of the canal where it enters the Ganges.
	Ricchu	384	367	178	
	Khagoul	804	800	605	
Received in Arrah Division.	Deegah	8,868	8,250	4,361	On the Sone at the head. A large village on the Arrah canal. Near the East Indian Railway and at the capital town of Shahabad. The nearest point to the town of Banerum. Near the railway and the enthal on to the Ganges.
	Divisional office	1,450	627	1,409	
	Dehree	3,418	2,274	2,388	
	Nariganj	1,785	1,072	932	
	Chowaree	348	368	251	
Buxar Division	Arrah	10,167	7,403	11,607	
	Banarum	436	356	513	
	Bedadi	2,876	4,827	7,980	
	Nokha	1,330	374	1,387	
	Nutwar	.....	54	1,074	
	Sikmur	1,210	52	143	
	Buxar	79	435	831	

100. The cost of the establishment for working the locks and collecting tolls was Rs. 13,051 for the year, against Rs. 13,133 expended in that preceding, and Rs. 13,174 in 1881-82.

101. The receipts from the transport service during the year 1883-84 were Rs. 37,161, being an increase of Rs. 5,260 over the amount received in the year previous; the expenses were, however, Rs. 32,475, or Rs. 6,485 in excess, so that the net profits were Rs. 4,686 only compared with Rs. 5,911 for 1882-83.

102. An endeavour was made to dispose of the steamers to a private company, but no acceptable offer was received; the service on the Patna Canal was, however, transferred to a contractor, from the 21st of January 1884, on his paying the usual tolls and Rs. 150 per month as hire of the steamer *Umpire*. No complaints have been received as to the manner in which this steamer was managed by him and a fresh arrangement has been entered into since the 20th October 1884, under which he has taken charge of the entire service.

103. The miscellaneous receipts during 1883-84 amounted to Rs. 34,405, being a falling off, compared with the previous year, of Rs. 12,602. The decrease is wholly in the item "Miscellaneous," which includes the profits on the manufacturing operations of the Dehree workshops, from which Rs. 3,550 was received against Rs. 19,359 in 1882-83.

104. The statement below gives the receipts and working expenses of the Sone canals for the last three years:—

	1881-82.	1882-83.	1883-84.
	Rs. .	Rs.	Rs.
<i>Receipts—</i>			
Water-rates	6,03,930	5,66,465	4,84,209
Navigation receipts	93,116	71,295	85,193
Miscellaneous	39,246	47,007	34,405
<b>Total</b>	<b>7,36,292</b>	<b>6,84,677</b>	<b>6,03,807</b>
<i>Working expenses—</i>			
Maintenance	3,28,032	4,02,841	3,74,795
Irrigation establishment	1,14,283	1,05,883	1,14,005
Navigation ditto	13,678	10,880	20,248
Refunds	1,329	1,237	5,429
	<b>4,57,322</b>	<b>5,20,841</b>	<b>5,14,477</b>
<b>Net profit</b>	<b>2,78,970</b>	<b>1,54,836</b>	<b>89,330</b>

Notwithstanding a decrease in the working expenses, there has been a falling off of Rs. 65,506 in the net revenue derived from these canals.

105. The causes of this unsatisfactory result have already been commented on, but it may be well to again state that so far as water-rates are concerned, in which the receipts have fallen off by Rs. 82,256 as compared with 1882-83, the cause is not a falling off in the area under irrigation, on which there has, in fact, been a large increase, the assessments on which are now being collected.

106. The cost per mile of maintaining the canals and distributaries comprised in the system is given in the statement below:—

NAME OF CANAL.	Name of division.	1881-82.		1882-83.		1883-84.	
		Number of miles.	Cost per mile.	Number of miles.	Cost per mile.	Number of miles.	Cost per mile.
Eastern Main	Eastern Sone	7½	2,335'0	7½	2,665'0	7½	4,847'9
Western Main	Arrah	9	4,044'0	9	5,908'0	9	5,841'8
Buxar	Buxar	13½	218'0	13½	322'0	13½	163'0
Patna	Do.	44	178'0	44	348'0	44	810'0
Arrah	Eastern Sone	70	377'0	70	575'0	76	401'2
Docmason Branch	Arrah	68	390'0	68	375'0	68	387'3
Behra	Do.	40½	195'0	40½	163'0	40½	144'6
Chewas	Do.	30½	219'0	31	305'0	31	128'7
Gurra Chowbey Branch	Buxar	30½	83'0	30½	103'0	30½	97'0
	Do.	88	49'0	88	49'0	88	123'0
Distributaries	Arrah	44½	51'0	45½	57'0	46½	41'8
	Buxar	68½	68'0	68½	67'0	69½	66'3
	Eastern Sone	211	42'0	211	42'0	211	46'1

107. The increased expenditure on the Main Eastern Canal is owing to the closure of that canal from the 11th of April to the 30th of June for the purpose of clearing the silt which had accumulated in its bed. This was effected by hand, 44½ lakhs of cubic feet of silt having been removed; at the same time 56½ lakhs were taken out of the Patna Canal. The Main Western Canal was not closed during the year, and the decreased costs of maintenance is due to no expenditure being incurred on silt clearance by hand.

108. The Superintending Engineer gives the amounts entered in the table below as the average cost of maintaining the canals and distributaries in the circle:—

	Rs.
The Eastern Main Canal costs to maintain	3,128 per mile.
" Western Main Canal (Arrah division)	5,828 ditto.
" Ditto (Buxar do.)	234 ditto.
" Other main canals—	
Arrah and Patna divisions	407 to 413 ditto.
Buxar division	243 ditto.
" Branch canals	86 to 183 ditto.
" Distributary channels	44 to 74 ditto.

109. The total quantity of silt removed from the canals by dredgers was 61,35,619 cubic feet. Details shewing the quantity excavated and cost for each canal are appended:—

	Cubic feet.	Cost.	Rate.
		Rs.	Rs. A. P.
Eastern Main Canal ...	11,77,214	4,052	3 7 0
Patna Canal ...	56,24,979	14,575	2 9 5
Sone river bed ...	9,48,470	1,842	1 13 6
Western Main Canal ...	33,79,219	24,560	8 15 10
Head lock, Dehree ...	72,073	213	2 15 6
Arrah Canal ...	5,58,643	3,608	8 11 5

The rate in the case of the Main Western Canal is high, as it includes the cost of removing the silt from the barges, carrying it over a high spoil bank, and depositing it on the berm beyond.

110. The cost of weed clearance during the year was Rs. 8,965 only against Rs. 14,377 in 1882-83, and Rs. 21,163 in 1881-82.

### SARUN CANALS.

111. The capital and revenue accounts of these canals, which have been constructed from provincial funds, are given below:—

#### I.—CAPITAL ACCOUNT.

PARTICULARS.	Outlay during 1883-84.	Outlay to end of 1883-84.
<b>DIRECT CHARGES.</b>	<b>Rs.</b>	<b>Rs.</b>
Works ...	3,586	4,75,786
Establishment ...	825	1,63,487
Tools and plant ...	1,492	25,244
Suspense balances ...	—9,907	.....
<b>Total</b> ...	<b>—4,004</b>	<b>6,64,517</b>
Less receipts on capital account ...	.....	498
<b>Net outlay</b> ...	<b>—4,004</b>	<b>6,64,019</b>
<b>INDIRECT CHARGES.</b>		
Capitalized abatement of land revenue ...	.....	87
Leave and pension allowances ...	116	28,990
<b>Total indirect charges</b> ...	<b>116</b>	<b>27,087</b>

#### II —REVENUE ACCOUNT—(ACTUALS).

	EXPENDITURE.			RECEIPTS.	
	During the year.	To end of the year.		During the year.	To end of the year.
	Rs.	Rs.		Rs.	Rs.
Works (extensions and improvements) ...	.....	.....	Water-rates ...	22,057	51,460
Repairs and maintenance ...	20,659	88,729	Navigation ...	13	262
Establishment ...	4,751	20,404	Miscellaneous ...	971	2,743
Tools and plant ...	—2,009	—7,890	<b>Total receipts</b> ...	<b>23,041</b>	<b>55,465</b>
<b>Total</b> ...	<b>23,401</b>	<b>1,01,343</b>	<b>Deficit</b> ...	<b>1,025</b>	<b>49,348</b>
<b>INDIRECT CHARGES.</b>					
Leave and pension allowances ...	685	3,570			
<b>GRAND TOTAL</b> ...	<b>24,086</b>	<b>1,04,913</b>	<b>GRAND TOTAL</b> ...	<b>24,066</b>	<b>1,04,813</b>

Note.—The account shewing the accumulated charges for interest is not included in accordance with the Government of India, Public Works Department, Circular No. IV, P. W., dated 1st May 1884.

112. The receipts from these canals for the year were Rs. 5,014 in excess of that previous, and the working expenses Rs. 10,882 less, the result being a deficit in the year's operation of Rs. 1,025, against Rs. 16,921 in 1882-83. The income earned by these canals is entirely derived from a guarantee amounting to Rs. 23,000 given by the landholders interested, who manage the irrigation within the limits of their own *dehats*, receiving water-rates not exceeding one rupee per acre from the cultivators.

113. The area irrigated during the year is returned by the Collector of Saran as 21,121 acres, and Rs. 5,030 is noted in the guarantors' returns as the amount recovered by them.

114. The rainfall table below, extracted from the Superintending Engineer's report, shows that in September and October the rainfall was deficient, and canal water accordingly valuable:—

Rainfall Table.

MONTH.	Monra.	Gopalganj.	Hatwa.	Badwa.	Jogayur.	Barhola.	Rajapah.	Arwah.	Stalpur.
	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.
April 1883	0.25	0.10	0.10	0.10	0.1	0.10	0.10	0.10	0.20
May	1.07	1.91	0.88	0.15	0.10	0.10	0.10	0.10	0.10
June	4.73	4.80	2.98	7.78	4.8	6.88	0.83	10.40	10.70
July	7.61	10.82	5.55	7.80	15.0	3.90	7.50	12.30	13.20
August	5.13	7.78	6.98	6.60	3.2	5.02	7.10	2.05	7.20
September	0.61	2.36	2.23	3.10	8.3	2.05	4.50	3.30	8.00
October	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
November	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
December	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
January 1884	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
February	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
March	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
Total	18.78	27.78	22.61	24.28	27.00	23.13	28.70	29.54	34.10
Total of 1883-83	No returns.	40.50	45.36	27.85	No returns.	22.00	No returns.	No returns.	No returns.
1881-82	43.86	No returns.	41.19	44.36	44.00	67.10	No returns.	44.18	No returns.

115. The operations of the year are described by the Executive Engineer, Mr. Faulkner, as follows:—

"Grave fears were entertained that the rice and rubber crops would fail, as there was not the usual rainfall in September and the early part of October. Early in October applications came in fast from the ryots for water from the canals. As usual, the ryots held off till the last moment, expecting the rain would come daily. To irrigate the country thoroughly, is necessary to throw the water from the Rupan Chap Sota into the canals by stopping off the discharge in the Sota. Great efforts were made in October to effect this object, but the discharge in the Sota was greater than could be carried off by the canals, and it was not until the 27th of the month, after four previous unsuccessful attempts, that a bund was thrown across. By this time it was too late for the rice crops on the lower canals, i.e., the Gandaki, Dhanai, and the Gangni. It was possible, however, to irrigate from the Daba through the Sota in October, and later from the head cut, and a large tract was irrigated in a rough-and-ready way by constructing dams with escape channels at every two miles or so, which threw the water over the country. A small area of rubber was damaged by this means, but the rice crops received water and were saved."

116. These canals are not provided with distributaries, and when water is required temporary dams are thrown across the *Sota*, an old river channel. There is a disposition on the part of the guarantors to arrange for the construction of permanent weirs and distributaries, but the branch of the river Gunduck, on which the head sluice is situated, shows signs of closing up, and it is not considered advisable to incur further expenditure until the course which the main stream will take is more fully apparent.

#### CALCUTTA AND EASTERN CANALS.

117. These canals are managed by the Board of Revenue, Lower Provinces, who submit a separate yearly report on their administration, that for 1883-84



was reviewed in this Department resolution of date the 28th November 1884.

Capital and revenue accounts were opened on the 1st of April 1883, and the following is an abstract of these accounts up to the 1st April 1884:—

	Rs.
<i>Capital cost—</i>	
Direct charges	51,92,444
Indirect charges	59,090
Grand total	52,51,534
Receipts to the 1st April 1884	1,75,62,487
<i>Working expenses—</i>	
Direct charges	63,70,953
Indirect charges	1,34,007
	65,04,960
Charges for interest	(a) 65,61,871
	1,30,66,831
Balance net revenue	44,95,656

(a) Interest is calculated *pro forma*. It is not exhibited in the Administrative account under Government of India public Works Department Circular No. 4P—W, dated 1st May 1884.

These accounts have not yet been finally approved, there has been considerable difficulty in determining the distribution of the capital and revenue charges, and it is only since 1861-62 that the accounts have been kept in this Department.

118. The canals have so far been a very profitable undertaking, and it is proposed to extend their usefulness by carrying out several urgently required improvements, partly in connection with the new Kidderpore Docks. About 65 lakhs of rupees will be required, and some arrangement by which the cost of these works can be met from funds obtained by loan will be necessary, as during the last six years the canals have, after crediting receipts, cost the province Rs. 7,75,777, whilst really earning Rs. 2,38,701, besides working expenses and interest charges.

119. The gross revenue of the year shows a slight decrease of Rs. 93 compared with that preceding; this is attributable to the partial failure of the jute and rice crops of 1883 in the districts served by the canal; in the remaining items of traffic there has been an increase due to the great improvements, which have recently been made in the canals: the tollage in the two articles mentioned above was Rs. 76,457 less than that received in 1882-83.

The revenue accounts for the two years are contrasted below:—

	Receipts.	Working expenses, direct and indirect.	Interest charges.	Net revenue.
	Rs.	Rs.	Rs.	Rs.
1882-83	5,84,194	3,26,897	3,28,897	2,37,297
1883-84	5,84,101	2,82,031	2,82,031	3,02,070

The diminution in working expenses is due to the maintenance charges being confined mostly to repairs; in 1882-83 several improvements, notably widening the canal between Dhappa and the railway bridge, and replacing the suspension by girder bridges, were carried out and charged to the revenue account of the canals.

120. The table following gives detailed information regarding the traffic passed through the canals during 1882-83, and the year now under review.

MONTH.	Number of boats.		Weight of cargo.		Value of cargo.		Tonnage of boats.				Tollage.	
							Tons.		Maunds.			
	1883-84.	1884-85.	1883-84.	1884-85.	1883-84.	1884-85.	1883-84.	1884-85.	1883-84.	1884-85.	1883-84.	1884-85.
<b>CIRCULAR CANAL.</b>	No.	No.	Mds.	Mds.	Rs.	Rs.	Tons.	Tons.	Mds.	Mds.	Rs. A. P.	Rs. A. P.
April	4,800	5,015	7,51,597	12,85,233	16,78,705	16,35,750	58,645	1,05,355	16,45,835	39,81,635	15,938 14 0	23,354 14 0
May	4,690	4,742	4,48,311	10,57,710	19,74,315	24,02,181	43,064	80,349	15,00,070	32,46,325	10,741 1 3	17,665 10 0
June	5,060	5,547	6,43,301	12,37,105	9,94,345	22,47,407	47,104	94,274	15,33,100	24,57,805	11,333 14 0	21,080 14 0
July	5,410	5,202	9,01,345	15,25,098	15,25,098	23,03,350	55,747	97,555	16,06,325	25,07,925	15,624 14 0	21,554 0 3
August	5,730	7,538	8,61,373	12,13,742	11,36,780	24,27,481	62,303	1,16,463	17,44,325	32,39,775	14,745 4 3	24,752 8 3
September	7,580	9,115	13,06,360	19,55,480	59,50,525	84,74,411	84,776	1,41,640	24,55,740	39,07,075	21,937 5 9	33,379 8 3
October	8,530	10,415	13,74,305	20,45,242	54,46,020	44,40,300	93,089	1,69,910	24,55,740	47,32,525	22,670 5 0	40,079 1 3
November	7,711	11,005	12,73,970	24,16,845	50,01,700	54,58,676	64,223	1,09,655	24,55,740	47,32,525	22,670 5 0	40,079 1 3
December	8,435	9,650	13,09,195	24,16,845	50,01,700	54,58,676	64,223	1,09,655	24,55,740	47,32,525	22,670 5 0	40,079 1 3
January	9,510	12,642	19,59,915	24,16,845	50,01,700	54,58,676	64,223	1,09,655	24,55,740	47,32,525	22,670 5 0	40,079 1 3
February	9,940	9,044	24,39,765	19,09,040	41,51,510	25,45,600	1,21,011	1,69,910	42,07,365	10,63,125	37,476 5 0	58,350 13 0
March	10,070	7,450	20,57,580	17,45,537	54,55,260	45,95,524	2,07,077	1,94,643	57,08,050	43,95,805	47,813 13 0	58,350 13 0
<b>Total Circular Canal</b>	<b>87,400</b>	<b>99,165</b>	<b>1,69,22,180</b>	<b>3,07,57,043</b>	<b>5,92,04,810</b>	<b>5,04,04,358</b>	<b>13,81,040</b>	<b>17,41,767</b>	<b>3,30,76,050</b>	<b>4,92,73,450</b>	<b>2,52,233 4 9</b>	<b>4,07,005 13 0</b>
<b>TOLLY'S NULLAH.</b>												
April	5,621	4,985	6,36,337	5,00,770	8,05,108	7,28,721	21,573	49,976	20,09,625	14,06,770	15,736 4 3	9,519 6 6
May	5,029	4,060	6,34,891	6,20,005	7,38,287	14,10,400	54,252	44,612	18,04,175	12,42,025	12,563 11 5	7,804 2 8
June	7,185	6,530	11,21,355	6,34,892	23,81,679	19,18,900	84,713	44,605	25,03,710	12,85,675	10,000 11 5	7,874 6 5
July	8,545	5,170	12,17,248	6,30,380	27,07,360	8,09,808	94,843	44,341	24,55,076	12,41,800	17,677 9 0	8,040 8 5
August	9,920	6,195	12,19,308	7,52,330	44,75,795	39,02,200	59,139	54,519	24,00,100	16,76,975	17,614 9 0	10,151 16 6
September	10,121	8,264	12,48,235	8,52,274	16,43,300	20,38,355	68,282	88,325	26,08,325	16,00,025	10,070 9 3	11,800 7 0
October	11,164	7,717	11,00,501	6,00,340	16,46,327	21,45,045	1,14,779	63,682	22,14,325	17,53,525	24,321 9 0	10,302 11 2
November	12,675	8,908	13,03,641	6,82,445	26,02,363	13,35,110	1,38,614	47,305	28,90,295	13,59,000	30,108 5 9	12,001 13 3
December	13,598	8,048	18,17,698	4,06,325	22,47,285	13,47,242	1,41,045	66,121	39,76,300	16,70,000	30,823 6 0	17,523 1 3
January	15,602	19,191	18,40,335	6,78,083	27,07,171	17,94,607	1,07,215	76,083	46,08,375	20,70,175	35,546 7 5	14,544 18 0
February	17,185	7,797	17,31,844	8,07,779	30,01,540	16,70,454	4,05,981	54,305	1,18,03,424	16,76,075	20,486 14 5	12,980 2 3
March	6,906	5,931	6,55,170	7,57,711	13,15,418	14,47,332	55,748	64,740	17,37,175	18,12,600	14,795 2 4	11,520 8 0
<b>Total Tolly's Nullah</b>	<b>1,52,003</b>	<b>82,135</b>	<b>1,48,77,078</b>	<b>70,19,080</b>	<b>2,05,45,820</b>	<b>1,96,93,974</b>	<b>15,20,088</b>	<b>5,60,696</b>	<b>4,30,69,044</b>	<b>1,88,62,469</b>	<b>2,53,734 13 5</b>	<b>1,26,416 8 0</b>
<b>GRAND TOTAL</b>	<b>2,10,018</b>	<b>1,81,301</b>	<b>3,00,99,258</b>	<b>3,77,76,123</b>	<b>8,04,10,630</b>	<b>7,01,98,332</b>	<b>29,01,128</b>	<b>24,11,463</b>	<b>7,61,45,094</b>	<b>6,81,35,919</b>	<b>5,06,968 2 3</b>	<b>5,33,421 5 0</b>

## GENERAL REMARKS.

121. The net income received during the year from the canals in Bengal, which have been constructed by Imperial Funds, viz., those classed as Productive Public Works, amounted to Rs. 1,00,447, against a budget estimate of Rs. 1,16,000. The actual receipts and working expenses (direct charges) amounted respectively to Rs. 11,69,841, and Rs. 10,69,394, against the budget estimate of Rs. 12,00,000 and Rs. 10,84,000.

122. The following statement shows the financial results calculated by earnings:—

	Rs.
Orissa canals	(—)95,477
Midnapore canal	65,908
Hidgelee tidal canal	17,009
Sone canals	3,47,432
<b>Total</b>	<b>3,34,872</b>

131. The approximate value of the crops irrigated was as follows:—

Orissa Canals—	Area irrigated.	Value of crop.
	Acres.	Rs.
Khureef	47,085	5,64,408
Rubbee	1,381	80,607
Perennial	344	86,817
<b>Total</b>	<b>48,760</b>	<b>7,31,832</b>
<b>Midnapore Canal—</b>		
Khureef	97,919	33,30,838
<b>Sone Canals—</b>		
Paddy	1,70,212	33,30,245
Sugarcane	18,567	6,30,084
Opium	1,408	3,19,633
Other crops	1,04,065	21,74,741
Five-year lease Khureef	37,005	6,11,576
Ditto rubbee	12,918	2,10,052
Ditto sugarcane	6,449	1,27,194
<b>Total</b>	<b>3,50,614</b>	<b>74,03,525</b>
<b>GRAND TOTAL</b>	<b>4,97,293</b>	<b>1,14,66,195</b>

123. The state of the canal plantations compared with the previous year is shown in the table below:—

CANALS.	1882-83.			1883-84.		
	Trees 12 feet high and above.	Saplings between 6 and 12 feet.	Seedlings.	Trees 12 feet high and above.	Saplings between 6 and 12 feet.	Seedlings.
	No.	No.	No.	No.	No.	No.
Orissa ...	38,291	22,693	61,535	44,479	24,936	70,703
Midnapur ...	3,570	3,921	3,533	3,942	3,242	3,164
Bone ...	60,104	44,590	108,955	67,298	45,191	89,917
Total ...	101,965	71,204	169,923	115,719	73,369	163,724
Increase ...	.....	.....	.....	13,754	2,165	-5,299

J. M. McNEILE, *Lieut.-Col., R.E.*,

*Chief Engineer.*

The 28th November 1884.

## Statement of Financial Results of Irrigation Works in Bengal, based on Actual Receipts for and to end of 1883-84

	PRODUCTIVE PUBLIC WORKS.					WORKS OTHER THAN PRODUCTIVE PUBLIC WORKS.							GRAND TOTAL—REMAINS.	
	Works in operation.					Works in abeyance.			Works suspended.		Works in progress.			Total.
	Orissa Canals.	Midnapore Canal.	Hidgell's Tidal Canal.	Sone Canals.	Total.	Tirhoot Project.	Hospitally Project.	Total.	Dumoodah Project.	Sarun Project.	Orissa Canal.	Total.		
<b>CAPITAL OUTLAY INCLUDING CHARGES FOR INTEREST.</b>														
Ordinary Productive Public Works ..	Rs. 6,34,112	Rs. 1,04,073			Rs. 7,38,185								Rs. 7,38,185	
Family Relief Protective Works ..														
Capitalization of maintenance of land revenue ..		Rs. 11,980			Rs. 11,980								Rs. 11,980	
Loss by exchange ..														
Leave and pension allowances ..		Rs. 11,980			Rs. 11,980								Rs. 11,980	
Total ..	Rs. 6,46,092	Rs. 1,16,053			Rs. 7,62,145								Rs. 7,62,145	
Ordinary Productive Public Works ..	Rs. 2,05,03,614	Rs. 34,98,171			Rs. 2,40,01,785								Rs. 2,40,01,785	
Family Relief Protective Works ..														
Capitalization of maintenance of land revenue ..		Rs. 70,783			Rs. 70,783								Rs. 70,783	
Loss by exchange ..		Rs. 1,53,153			Rs. 1,53,153								Rs. 1,53,153	
Leave and pension allowances ..		Rs. 4,38,120			Rs. 4,38,120								Rs. 4,38,120	
Total ..	Rs. 2,12,41,507	Rs. 4,62,026			Rs. 2,17,03,533								Rs. 2,17,03,533	
<b>REVENUE ACCOUNT.</b>														
Gross Revenue ..	Rs. 2,37,882	Rs. 2,37,882			Rs. 4,75,764								Rs. 4,75,764	
For the year ..	Rs. 2,37,882	Rs. 2,37,882			Rs. 4,75,764								Rs. 4,75,764	
To end of year ..	Rs. 2,37,882	Rs. 2,37,882			Rs. 4,75,764								Rs. 4,75,764	
Total ..	Rs. 4,75,764	Rs. 4,75,764			Rs. 9,51,528								Rs. 9,51,528	
Working Expenses ..														
For the year ..	Rs. 1,12,000	Rs. 1,12,000			Rs. 2,24,000								Rs. 2,24,000	
To end of year ..	Rs. 1,12,000	Rs. 1,12,000			Rs. 2,24,000								Rs. 2,24,000	
Total ..	Rs. 1,12,000	Rs. 1,12,000			Rs. 2,24,000								Rs. 2,24,000	
Net Revenue ..	Rs. 3,63,764	Rs. 3,63,764			Rs. 7,27,528								Rs. 7,27,528	
For the year ..	Rs. 3,63,764	Rs. 3,63,764			Rs. 7,27,528								Rs. 7,27,528	
To end of year ..	Rs. 3,63,764	Rs. 3,63,764			Rs. 7,27,528								Rs. 7,27,528	
Total ..	Rs. 7,27,528	Rs. 7,27,528			Rs. 14,55,056								Rs. 14,55,056	

	PRODUCTIVE PUBLIC WORKS.										WORKS OTHER THAN PRODUCTIVE PUBLIC WORKS.				REMARKS.	
	Works in operation.										Works in abeyance.					Total.
	Orissa Canal.	Midnapore Canal.	Hidralee, Tota Canal.	Bone Canal.	Total.	Tripoot Project.	Hareilly Project.	Total.	Damoodah Project.	Sayam Project.	Orissa Canal.	Total.				
NET REVENUE.																
For the year	Rs. 1,67,033	40,000	12,407	61,646	60,473	Rs. 1,000	Rs. 1,000	Rs. 1,000	Rs. 1,000	Rs. 1,000	Rs. 1,000	Rs. 1,000	Rs. 1,000	Rs. 1,000	Rs. 1,000	
To end of year	(-) 1,67,033	(-) 40,000	(-) 12,407	(-) 61,646	(-) 60,473	(-) 1,000	(-) 1,000	(-) 1,000	(-) 1,000	(-) 1,000	(-) 1,000	(-) 1,000	(-) 1,000	(-) 1,000	(-) 1,000	
CAPITAL-INTEREST AT 4 PER CENT ON CAPITAL OUTLAY (INCLUDING INTEREST WHILE WORKS WERE UNDER CONSTRUCTION.)																
For the year	Rs. 1,00,702	2,07,648	70,000	2,00,000	2,00,000	Rs. 1,000	Rs. 1,000	Rs. 1,000	Rs. 1,000	Rs. 1,000	Rs. 1,000	Rs. 1,000	Rs. 1,000	Rs. 1,000	Rs. 1,000	
To end of year	(-) 1,00,702	(-) 2,07,648	(-) 70,000	(-) 2,00,000	(-) 2,00,000	(-) 1,000	(-) 1,000	(-) 1,000	(-) 1,000	(-) 1,000	(-) 1,000	(-) 1,000	(-) 1,000	(-) 1,000	(-) 1,000	
DIFFERENCE BETWEEN NET REVENUE AND INTEREST.																
For the year	Rs. 1,37,724	(-) 2,00,000	(-) 1,35,412	(-) 1,38,708	(-) 1,37,10,293	Rs. 1,000	Rs. 1,000	Rs. 1,000	Rs. 1,000	Rs. 1,000	Rs. 1,000	Rs. 1,000	Rs. 1,000	Rs. 1,000	Rs. 1,000	
To end of year	(-) 1,37,724	(-) 2,00,000	(-) 1,35,412	(-) 1,38,708	(-) 1,37,10,293	(-) 1,000	(-) 1,000	(-) 1,000	(-) 1,000	(-) 1,000	(-) 1,000	(-) 1,000	(-) 1,000	(-) 1,000	(-) 1,000	
If credit be taken for direct returns only																
For the year	Rs. 1,37,724	(-) 2,00,000	(-) 1,35,412	(-) 1,38,708	(-) 1,37,10,293	Rs. 1,000	Rs. 1,000	Rs. 1,000	Rs. 1,000	Rs. 1,000	Rs. 1,000	Rs. 1,000	Rs. 1,000	Rs. 1,000	Rs. 1,000	
To end of year	(-) 1,37,724	(-) 2,00,000	(-) 1,35,412	(-) 1,38,708	(-) 1,37,10,293	(-) 1,000	(-) 1,000	(-) 1,000	(-) 1,000	(-) 1,000	(-) 1,000	(-) 1,000	(-) 1,000	(-) 1,000	(-) 1,000	
If credit be taken for direct returns only																
For the year	Rs. 1,37,724	(-) 2,00,000	(-) 1,35,412	(-) 1,38,708	(-) 1,37,10,293	Rs. 1,000	Rs. 1,000	Rs. 1,000	Rs. 1,000	Rs. 1,000	Rs. 1,000	Rs. 1,000	Rs. 1,000	Rs. 1,000	Rs. 1,000	
To end of year	(-) 1,37,724	(-) 2,00,000	(-) 1,35,412	(-) 1,38,708	(-) 1,37,10,293	(-) 1,000	(-) 1,000	(-) 1,000	(-) 1,000	(-) 1,000	(-) 1,000	(-) 1,000	(-) 1,000	(-) 1,000	(-) 1,000	
If credit be taken for indirect returns only																
For the year	Rs. 1,37,724	(-) 2,00,000	(-) 1,35,412	(-) 1,38,708	(-) 1,37,10,293	Rs. 1,000	Rs. 1,000	Rs. 1,000	Rs. 1,000	Rs. 1,000	Rs. 1,000	Rs. 1,000	Rs. 1,000	Rs. 1,000	Rs. 1,000	
To end of year	(-) 1,37,724	(-) 2,00,000	(-) 1,35,412	(-) 1,38,708	(-) 1,37,10,293	(-) 1,000	(-) 1,000	(-) 1,000	(-) 1,000	(-) 1,000	(-) 1,000	(-) 1,000	(-) 1,000	(-) 1,000	(-) 1,000	

(a) Excludes of Rs. 457 paid in England.

## Rainfall, Weather, and State and Prospects of the Crops.

Statement showing Rainfall, Weather, and State and Prospects of the Crops in the different Districts of Bengal, as reported to Government during the week ending the 27th December 1884.

No.	District, and date of return.	Rainfall at Sudder Stations in inches.	Character of the weather, state and prospects of the crops, and state of health at date.
<b>BENGAL.</b>			
<i>Western Districts.</i>			
Sudder Div.	1. Bardwan, Dec. 27 '84	Nil	Weather—cool and cloudy. <i>Amun</i> paddy continues to be harvested; outturn varies from 2 to 12 annas. Sugarcane and rubber crops continue to be promising. Common rice is generally selling at from 15 to 18 seers per rupee. General health is on the whole good. A few cases of fever are reported from three thanas of the Sudder sub-division.
	2. Bankura, " 27 "	Nil	Weather—cold and cloudy during the latter part of the week. Few drops of rain fell on Tuesday last. The reaping of <i>amun</i> paddy is drawing to its close. Winter crops doing well. Prices of food-grains stationary. Public health good.
	3. Beerbhoom, " 27 "	A few drops of rain fell on day.	Weather—cloudy, cold, and fine. <i>Amun</i> paddy is being reaped. There was a slight fall of rain in some places in the interior, but enough as to do any good to the crops, which are, however, getting on fairly well. Sugarcane cultivation getting on well; in the Nulhati police station it is being out. In the Rampore Haat sub-division harvesting of <i>amun</i> paddy is nearly completed. The other winter crops are doing well. Price of new rice is still high. Public health good, except a few cases of fever and cholera in some parts of the district.
	4. Midnapore, " 27 "	0.01	Weather—seasonable. Prospects of all crops good. Isolated cases of cholera are still reported from many places.
	5. Hooghly, " 27 "	Nil	Weather—sunny with two cloudy days. Harvesting of <i>amun</i> paddy is in progress. Prospects of crops continue to be very favourable. Prices of food-grains stationary. Public health improving; fever prevails only in some parts of Jahnabad.
	Howrah, " 29 "	Nil	Weather—seasonable. State and prospects of crops satisfactory in every respect.
<i>Central Districts.</i>			
Paschim Div.	6. 24-Pargha, Dec. 23 '84	Nil	Weather—seasonable, but cloudy towards the latter part of the week. Prospects of standing crops continue satisfactory. <i>Amun</i> paddy is being harvested with an outturn decidedly over an average crop. Public health is generally good, though isolated cases of cholera and fever are reported from the Diamond Harbour and Basirhat sub-divisions.
	7. Nadua, " 27 "	Nil	Weather—seasonable. Cold-weather crops doing well. Harvesting of <i>amun</i> paddy not yet completed. Fever continues.
	8. Khoolna, " 27 "	Nil	Weather—cool. Harvesting of <i>amun</i> paddy going on satisfactorily. Cholera prevails in some places, otherwise public health fair.
	9. Jessore, " 27 "	Nil	Weather—seasonable. <i>Amun</i> paddy is still being harvested. Winter crops are doing well. Fever abating; cases of cholera are reported here and there.
Rajshahi Div.	10. Moorshadabad, " 27 "	0.18	Weather—mild; at times cloudy and warm. Harvesting of <i>amun</i> paddy is still in progress. Prospects of rubber crops continue to be good, but a little rain would be beneficial. Rice selling at from 15 to 17 seers per rupee. Public health good, although there are still some cases of cholera in Kowada thana.
	11. Dinagore, Dec. 26 '84	Nil	Weather—seasonable. Harvesting of <i>amun</i> paddy still continues, fair outturn is expected, except in Pathitula thana, in which the outturn of paddy is very poor indeed. The prospects of other crops good. Rice selling at from 11 to 16 seers per rupee.
	12. Rajshahi, " 27 "	Nil	Weather—seasonable. Harvesting of <i>amun</i> paddy nearly finished; prospects fair. Rubber crops generally doing well, but rain is wanted in some places. Public health generally good.
	13. Rangore, " 27 "	Nil	Weather—seasonable. Harvesting of <i>amun</i> paddy still going on. Prospects of mustard, sugarcane, &c., are good. Prices of food-grains stationary. Fever and cholera are gradually abating.
	14. Bogra, " 27 "	Nil	Weather—seasonable. Harvesting of <i>amun</i> paddy going on. Sugarcane, mustard and pulses are doing well. Public health fair.
	15. Pubna, " 28 "	Nil	Weather—cold state and prospects of crops fair.
	16. Darjeeling, " 27 "	Nil	Weather—cloudy and raw, but dry. Prospects of crops good.
	17. Tulpore, " 27 "	Nil	Weather—seasonable; generally foggy in the mornings with occasional clouds, in the afternoon. Harvesting of <i>haimanti</i> paddy is proceeding. Cutting of sugarcane has commenced in thana Boda. Other standing crops doing well. Price of rice stationary, i.e. 15 to 17 seers per rupee. Public health good.
<i>Eastern Districts.</i>			
Dacca Div.	18. Dacca, Dec. 23 '84	Nil	Weather—cold. Prospects of crops good; harvesting of <i>amun</i> paddy nearly completed. Cutting of sugarcane continues. Public health good.
	19. Faridpore, " 27 "	Nil	Weather—seasonable and cool. Harvesting of <i>amun</i> paddy nearly completed. Winter crops promise well. Cholera abating.
	20. Backergunge, " 25 "	Nil	Weather—seasonable. Prospects of crops fair. <i>Amun</i> paddy is being reaped. Cholera prevails in some parts of the district.
	21. Mymensingh, " 20 "	Nil	Weather—seasonable. Harvesting of <i>amun</i> paddy continues. Prospects of all cold-weather crops good.

No.	District and date of return.	Rainfall at Sudder Station in inches.	Character of the weather, state and prospects of the crops, and state of health at date.
<b>BENGAL.—consolid</b>			
<i>Eastern Districts.</i>			
<b>CHITTAGONG DIV.</b>	23 Chittagong, Dec. 29 '84	Nil	Weather—seasonable. Prospects of crops good. Harvesting of <i>amun</i> paddy nearly finished with about a twelve-anna outturn. Prices of food-grains stationary. Sporadic cases of cholera throughout the district.
	23 Noakhally, " 26 "	Nil	Weather—seasonable; clear with occasional foggy mornings. <i>Amun</i> paddy is still being reaped. Prospects of <i>rubber</i> crops fair. Cholera reported from the interior.
	24 Tipperah, " 25 "	Nil	Weather—seasonable. Prospects of crops continue to be favourable; outturn of <i>amun</i> paddy is estimated at 12 annas. <i>Rubber</i> crops are flourishing. Prices of food-grains slightly falling. Cholera abating, and public health in other respects good.
	25 Chittagong Hill Tracts, " 28 "	Nil	Weather—seasonable, foggy in the mornings. Transplanting of tobacco is over. Sugarcane and other cold-weather crops are doing well. Paddy is being harvested.
	Hill Tipperah, " 24 "	Nil	Weather—cold. Reaping of <i>amun</i> paddy nearly over with good outturn. Sowing of mustard, chillies and tobacco also nearly over. A few sporadic cases of cholera here and there, otherwise public health good.
<b>BEHAR.</b>			
<b>PATNA DIV.</b>	26 Patna, Dec. 27 '84	Nil	Weather—cloudy during the latter part of the week. Harvesting of paddy and <i>jowar</i> still continues. <i>Rahar</i> and mustard look well. Prospects of <i>rubber</i> crops good. Rain wanted in some places. Poppy crop is growing well. Public health good.
	27 Gaya, " 27 "	Slight rain.	Weather—cloudy. Harvesting of paddy proceeding. The prospects of <i>rubber</i> crops excellent; poppy crop also is in a satisfactory state. Health good.
	28 Shahabad, " 27 "	Nil	Weather—cool and cloudy. Prospects of <i>rubber</i> crops favourable. Sugarcane pressing is still going on. Poppy crop is reported to be excellent and is well advanced for the season.
	29 Darbhanga, " 27 "	Nil	Weather—seasonable. Harvesting of paddy continues. <i>Rubber</i> crops coming on well. <i>Rahar</i> and mustard are flowering. Rain is wanted in some places. Tobacco and poppy crops look very promising. Prices of rice stationary; those of other grains slightly falling. Public health good.
	30 Munger, " 27 "	Nil	Weather—seasonable. Harvesting of paddy still going on and a moderate outturn is expected. Prospects of both <i>rubber</i> and opium crops continue favourable. Public health good.
<b>BHAGALPORE DIV.</b>	31 Saran, " 27 "	Nil	Weather—bright and seasonable. Paddy is being harvested. Prospects of <i>rubber</i> crops continue good. Condition of the poppy crop is excellent, young plants are looking very healthy. Prices falling. Public health good.
	32 Champaran, " 27 "	Nil	Weather—seasonable. Prospects of standing crops continue good. <i>Aghani</i> paddy is being reaped. Prospects of poppy crop good. Public health fair. A few cases of fever are reported from the interior.
	33 Monghyr, Dec. 27 '84	Nil	<i>Aghani</i> paddy is being reaped; the outturn is estimated at 8 to 10 annas. <i>Rubber</i> crops promising. Poppy crop is doing well. Public health good.
	34 Bhagalpore, " 27 "	Nil	Weather—cloudy and warmer than usual. Paddy is being cut. <i>Rubber</i> crops are generally very good, but a little rain would do much good. Prices stationary. Public health good.
	35 Purneah, " 27 "	Nil	Weather—seasonable; rain wanted. <i>Aghani</i> paddy nearly a full crop in the Kishongunge sub-division, a little over half in the Arrareah sub-division, but very little in the Sudder sub-division. Winter crops very good in the Sudder and the Arrareah sub-divisions, but they are little grown in the Kishongunge sub-division.
<b>ORISSA.</b>	36 Malda, " 27 "	Nil	Weather—cold and fair. Harvesting of winter paddy continues; average outturn is not expected to be more than an eight-anna crop. Prices of common rice ranges from 12 to 16 seers per rupee. Prospects of <i>rubber</i> crops still not bad. Cholera has made its appearance at places in the interior; otherwise general health good.
	37 Bonthal Pergas, " 27 "	Nil	Weather—cloudy for one or two days of the week. Cutting of <i>aghami</i> paddy now well advanced. Prospects of <i>rubber</i> crops good, but they would be improved by a fall of rain.
<b>ONDA DIV.</b>	38 Cuttack, Dec. 26 '84	0.28	Weather—cool and cloudy at times. Reaping of <i>sarad</i> on low land busily going on everywhere with an average outturn. The rain on the 23rd injured <i>rubber</i> crops to some extent. Common rice selling at from 16 to 20 seers per rupee in the town and 25 seers, on an average, in the interior. Public health generally good, except that a few cases of intermittent fever are reported from the interior.
	39 Pooree, " 26 "	0.28	Weather—getting cooler. Harvesting of <i>sarad</i> continues; <i>dalia</i> crops thriving; miscellaneous crops doing well. Common rice selling on an average at 24 seers 3 chittack per rupee in the Sudder sub-division and 26 seers 1 chittack in the Khorda sub-division. Cholera still prevails.
	40 Balasore, " 26 "	Nil	Weather—cloudy. Reaping of paddy nearly finished, threshing has commenced. Sporadic cases of cholera and fever still continue in the interior.
<b>CHOTA NAGPORE.</b>			
<i>South-West Frontier Agency.</i>	41 Hazaribagh, Dec. 26 '84	Nil	Weather—clear and cold. Cutting of paddy nearly over. <i>Rubber</i> crops doing well. Prospects of poppy in irrigated tracts good. Common rice selling at from 13 to 17 seers per rupee. General health good.
	42 Lohardugga, " 27 "	0.10	Weather—cloudy for the last day or two. Rain wanted for <i>rubber</i> crops in Palamow. Outturn of winter paddy in the Sudder sub-division is estimated at 14 annas. Prices stationary on the whole. Health good.
	43 Singhbhoom, " 26 "	Nil	Weather—bright and warm. Harvesting of paddy finished; outturn excellent. Cold-weather crops are doing well. General health good.
	44 Manbhoom, " 27 "	0.08	Weather—cool and seasonable. Rain fell on the 23rd instant. Paddy nearly all reaped; outturn seems best in the west and south of the district; worst in pergunnah Bagda and in the neighbourhood (south-east); on the average a 9 to 12-anna crop may be secured. Sugarcane and other spring crops promise well. Coarse rice sold on the 27th instant in the Purulia market at 32½ seers per rupee. Cattle disease reported from Purulia and Iobagar.

Published for general information.

CALCUTTA, STATISTICAL DEPT.,  
The 30th December 1884.COLMAN MACAULAY,  
Secy. to the Govt. of Bengal.



## Results of the Meteorological Observations taken at the Alipore Observatory from 21st to 27th December 1884.

Month.	Date.	Maximum in sun.	Number of hours of bright sunshine.	Mean pressure barometer at 59° Fahr.	TEMPERATURE.				HYGROMETRY.				Wind.		Rain.	WEATHER.
					Mean.	Maximum.	Range.	Minimum.	Mean wet bulb.	Vapour tension.	Dew point.	Humidity.	Prevailing direction.	Miles recorded.		
1884.		°		Inches.	°	°	°	°	°	Inches.	°	%			Inches.	
Dec.	21st	125.7	0.1	30.048	63.8	75.6	21.7	53.9	58.5	0.426	54.1	75	NNE and NNW	03	Nil.	Clear, ☀
"	22nd	123.8	8.6	0.019	64.0	75.8	21.8	53.6	58.9	0.436	55.1	75	NNW and E by N	03	"	Chiefly clear, ☀
"	23rd	125.8	4.0	0.036	65.3	74.8	19.5	56.7	60.5	0.472	57.2	77	E by N and ESE	75	Not measureable.	Chiefly cloudy, ☁
"	24th	125.6	9.4	0.050	65.9	76.7	20.8	57.1	60.9	0.474	57.4	79	N and NW	63	Nil.	Clear.
"	25th	129.5	4.8	0.080	67.0	78.6	21.6	59.4	62.4	0.505	59.3	78	NW, and NW by N	0	"	Partially cloudy, ☁
"	26th	131.4	8.8	0.16	66.7	78.5	21.8	59.4	61.1	0.465	56.9	73	N and NNW	78	"	Chiefly cloudy.
"	27th	129.4	7.3	0.029	65.6	75.1	19.5	58.8	60.9	0.447	55.8	73	NNW and WNW	09	"	Chiefly cloudy, ☁

The mean pressure of the seven days

The average pressure of the corresponding period for 24 years, S. G.'s Office

Inches

30.026

30.039

The total number of hours of bright sunshine

Hours.

52.0

The maximum possible number of hours of sunshine

74.9

°

The mean temperature of the seven days

°

65.4

The average temperature of the corresponding period for 24 years, S. G.'s Office

67.8

The extreme variation of temperature

25.2

The maximum temperature

78.8

The highest velocity of the wind in one hour

Miles.

7

Miles.

The highest pressure of wind on one square foot

Not measureable.

%

The mean relative humidity

75

The average relative humidity of the corresponding period for 24 years, S. G.'s Office

71

Inches.

The total fall of rain from 21st to 27th December 1884

Not measureable.

The average fall of the corresponding period for 24 years, S. G.'s Office

0.01

The total fall from 1st January to 27th December 1884

82.61

The average fall of the corresponding period for 24 years, S. G.'s Office

65.24

The mean pressure, temperature, &amp;c., are deduced from the traces of the Barograph and Thermograph.

The maximum and minimum temperatures are obtained from self-registering thermometers. All the thermometers are verified, and the readings have been corrected to a standard constructed and verified at the Kew Observatory. They are exposed under a thatched shed open at the sides, and are suspended four feet above the ground.

The barometer readings are corrected approximately to those of the standard Newman's No. 86 formerly at the Surveyor-General's Office.

The hygrometric elements are obtained from Tables III, IV, and V of the official tables computed in the Meteorological Office, and based on Regnault's modifications of August's formula.

The directions and the movement of the wind are taken from the trace of a Beckley's anemograph.

The mouth of the rain-gauge is one foot above the ground.

o overcast, d drizzling rain, ☁ dew, ☁ fog.

W. L. DALLAN,

For Meteorological Reporter to the Government of India.

METEOROLOGICAL OFFICE, INDIA;  
Calcutta, the 29th December 1884.

## Meteorological Report of the Province of Bengal

			STATION OBSERVATIONS.														
DISTRICT	Representative station.		AIR PRESSURE.			WIND.		TEMPERATURE.							Average humidity at 10 A. M.	Average cloud amount at 10 A. M. for week.	
			Mean barometric height, 10 A. M.	Mean reduced to sea-level.	Variation from mean.	Prevailing direction.	Mean wind velocity.	Highest during week.	Lowest during week.	Mean maximum temperature.	Mean minimum temperature of week.	Mean daily temperature of week.	Variation from normal mean of week.	Mean 10 A. M. temperature.			
CENTRAL.	Gopalpore*	...	30.005	30.115	—	N	264	75.1	58.0	74.0	51.0	67.3	—	71.4	76	47	
	False Point	...	30.007	30.119	—0.12	NE	103	80.4	62.3	70.0	57.0	67.2	+1.7	72.3	71	36	
	Cuttack	...	30.042	30.130	+0.08	Calm	21	63.3	54.0	73.7	50.1	60.8	+0.4	72.1	63	37	
	Balasore	...	30.078	30.139	—	NNW	108	81.5	60.3	70.5	55.1	60.8	—	71.0	55	40	
SOUTH-WEST BENGAL.	South-West Midnapore	Banger Island	...	30.100	30.137	—0.04	NE	134	75.3	56.0	74.0	50.1	60.8	+1.0	70.5	71	41
	South 24 Pargunnahs	Midnapore	...	30.065	30.143	—	N	80.0	82.3	51.7	77.8	55.1	60.8	—	71.5	67	38
	24 Pargunnahs	Calcutta	...	30.100	30.131	0	NNE	80.0	78.4	53.6	75.0	50.1	60.0	+2.4	68.7	63	33
	Howrah	...	30.044	30.145	+0.10	NE & NW	30.7	80.2	64.5	77.4	56.0	67.0	+2.3	70.0	63	51	
	Burdwan	...	30.044	30.145	+0.10	NE & NW	30.7	80.2	64.5	77.4	56.0	67.0	+2.3	70.0	63	51	
	Bankura	...	30.044	30.145	+0.10	NE & NW	30.7	80.2	64.5	77.4	56.0	67.0	+2.3	70.0	63	51	
	Bardhaman	...	30.044	30.145	+0.10	NE & NW	30.7	80.2	64.5	77.4	56.0	67.0	+2.3	70.0	63	51	
	West Bardhaman	...	30.044	30.145	+0.10	NE & NW	30.7	80.2	64.5	77.4	56.0	67.0	+2.3	70.0	63	51	
	Moohshabad	Barhampore	...	30.044	30.145	+0.10	WSW	40.8	77.4	53.3	74.3	54.4	66.3	+1.0	68.1	70	10
	Naadua	...	Observatory not started.														
SOUTH-EAST BENGAL.	Joanore	...	30.085	30.121	+0.11	Calm & N	31.0	70.2	51.0	77.3	50.3	65.0	+1.1	72.1	64	34	
	Khoolna	...	30.017	30.111	+0.10	NE	41.0	72.1	54.3	77.1	53.7	63.3	—0.1	69.6	76	13	
	Chittagong	...	Observations not received.														
	Chittagong Hill Tracts	Detmadi	...	Observations not taken under order.													
	Beckergunge	...	30.074	—	—	—	—	—	—	—	—	—	—	—	—	—	
	Noakhali	...	—	—	—	Calm	40.4	70.3	51.0	70.9	54.0	64.3	—	71.3	64	0	
	Noakhali	...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
	Farredipore	...	30.085	—	—	N	20.0	77.5	53.0	70.0	54.0	60.1	—	71.1	60	0.0	
	Dacca	...	30.099	30.117	+0.025	N	21.0	70.3	54.1	77.3	53.6	60.3	+0.3	72.7	65	0.3	
	Comilla	...	30.095	30.103	—	NW	13.0	73.4	54.1	77.0	53.3	63.3	—	71.3	65	0	
NORTH BENGAL.	Mymensingh	...	30.036	—	—	NNE	50.0	75.4	46.1	74.0	47.5	61.3	—	—	—	16.4	
	Sorjagunge	...	30.090	30.123	—	ENE	37.0	77.0	52.1	76.3	53.3	64.3	—	69.2	73	1.4	
	Bogra and Fataha	...	30.084	—	—	Calm	205.7	77.6	53.0	74.6	57.3	67.3	—	69.3	65	0.7	
	Rajshahi	Rampore Bannia	...	30.044	30.110	—	NE	11.0	76.6	48.0	73.6	50.7	61.0	—	67.0	67	2.5
	Dinagore	...	30.013	30.141	—	ENE	40.3	77.1	48.3	76.3	50.3	63.3	—	69.3	64	0	
	Rangpur	Rangpur*	...	30.013	30.143	—	N & NE	27	77.0	48.0	75.7	48.3	63.3	—	68.3	58	1.3
	Jalpigore	...	30.042	30.130	—	E	33.3	77.7	48.1	74.0	50.1	63.3	—	67.0	65	1.0	
	Cooch Behar	...	30.042	30.130	—	—	—	—	—	—	—	—	—	—	—	—	
	Darjeeling Hill District	Darjeeling	...	30.057	—	—	Calm	1	47.6	38.1	44.5	53.3	30.7	—	48.3	27	0.1
	Purneah	...	30.007	30.140	+0.007	Calm	4.5	77.3	44.3	76.0	44.0	61.0	—0.1	69.1	50	1.4	
NORTH-EAST BENGAL.	North Bhagulpore	...	30.007	30.140	+0.007	Calm	4.5	77.3	44.3	76.0	44.0	61.0	—0.1	69.1	50	1.4	
	Moasarpore	Durbhanga	...	30.088	30.153	+0.035	SW	30.0	74.4	51.4	73.0	53.3	63.4	+1.0	66.4	75	3.3
	Durbhanga	...	30.008	30.144	—	NNE	76.3	75.0	41.0	73.7	48.3	60.3	—	69.3	70	4.1	
	Champana	Motihari	...	30.043	—	—	Variable	14.3	75.3	46.3	73.3	51.3	63.3	—	68.1	68	3.3
	Saria	Chupra	...	30.079	30.154	—	SE	110.0	70.3	50.0	73.7	53.4	64.3	—	65.1	68	3.7
	Shahad	Buxar	...	30.087	30.143	—	NW	30.0	77.4	48.0	73.0	53.3	63.3	—	66.0	63	4.0
	...	Arrah	...	30.013	30.119	—	ENE	17.0	75.3	48.0	70.3	49.0	61.7	—	65.4	66	1.0
	Gya	Gya	...	30.050	30.131	—	Calm	11.3	75.3	48.1	70.4	48.0	61.3	—0.7	60.3	54	4.7
	Patna	Bankipore	...	30.075	30.173	+0.040	E	31.3	74.0	49.3	73.0	53.1	63.0	+2.0	68.0	64	5.3
	South Bhagulpore	Bhagulpore*	...	30.063	30.133	—	Calm	18.0	75.4	48.0	73.0	51.7	63.3	—	65.3	63	1.3
SOUTH BENGAL.	Mouhlyr	...	30.018	—	—	N	60.0	70.0	49.0	76.4	51.7	61.7	—	67.1	70	1.0	
	South Pargunnahs	Doomla	...	30.043	30.136	+0.10	NW	32.0	73.4	49.8	70.7	53.9	61.3	+1.0	64.0	42	4.3
	Hazaribagh	...	30.043	30.136	+0.10	NW	32.0	73.4	49.8	70.7	53.9	61.3	+1.0	64.0	42	4.3	
	Lehardwara	Manmora	...	30.042	30.135	—	—	—	74.0	48.0	70.3	50.3	60.4	—	64.0	61	3.0
	Manbaram	Chyabara	...	30.015	—	—	N	104.1	—	48.0	—	50.3	—	—	60.0	60	3.0

\* Means for 31 days.

Notes.—Summary.—The normal means of air pressure and temperature are the arithmetical averages or means of the readings during the same period of the year, where it is expressed as a percentage, saturated air being represented by 100. A clear sky is denoted by 0 and an overcast sky by 100. The normal means of the rainfall are the numerical means or averages of the rainfall in that district determined from the returns sent in by the sub-divisions (i.e., the total rainfall at the sub-divisional stations in the district during the year divided by the number of stations. A rain-

# SUPPLEMENT TO THE CALCUTTA GAZETTE, DECEMBER 31, 1884.

for the week ending Friday, the 26th December 1884.

Rainfall of week at observing stations.	DISTRICT OBSERVATIONS.										Representative station.	DISTRICT.
	RAINFALL.											
	Of week.		Since 1st of month.			Since 16th May.			Average number of rainy days.	Normal number of rainy days.		
	Mean for district.	Normal mean.	Mean for district.	Normal mean.	Variation.	Mean for district.	Normal mean.	Variation.				
0'12	—	—	—	—	—	—	—	—	—	—	Gopalgore	...
0'05	0'30	0'01	0'30	0'27	-0'11	40'85	57'60	-7'85	1'8	0'1	Falak Point	Pooree
0'29	0'40	NH	0'40	0'44	+0'04	45'11	52'00	-6'89	1'8	0'0	Outlook	Outlook
NH	0'08	NH	0'08	0'23	-0'15	50'10	53'07	+2'97	0'5	0'0	Balaure	Balaure
NH	NH	NH	NH	0'13	-0'33	49'09	51'03	+7'06	0'0	0'0	Sanger Island	South-West
0'01	NH	0'01	NH	0'21	-0'21	45'01	50'03	-7'01	0'0	0'1	Midnapore	Midnapore
NH	NH	0'02	NH	0'20	-0'20	45'03	51'07	-2'04	0'0	0'1	Calcutta	How
NH	0'06	NH	0'06	0'15	-0'10	35'97	40'33	-10'36	0'3	0'0	Burdwan	Burd
0'07	0'01	NH	0'01	0'10	-0'10	35'03	41'10	-15'21	0'3	0'0	Ranigunge	Ho
0'13	0'03	NH	0'03	0'13	-0'10	35'45	49'74	-14'29	0'4	0'0	Berhampore	Mo
	NH	0'04	NH	0'10	-0'10	30'43	40'44	-15'00	0'0	0'1	.....	N
NH	NH	0'02	NH	0'20	-0'20	53'11	63'20	-9'09	0'0	0'1	Jessore	J
NH	NH	NH	NH	0'18	-0'18	100'84	112'28	-5'44	0'0	0'0	Chittagong	...
	NH	0'02	NH	0'00	-0'00	62'66	60'30	-23'36	0'0	0'1	Dumagiri	...
	NH	0'01	NH	0'02	-0'01	53'11	70'77	+6'66	0'0	0'1	Barisal	h
NH	NH	NH	NH	1'01	-1'01	95'44	110'10	-16'66	0'0	0'0	Noakholly	No
NH	NH	0'03	NH	0'10	-0'10	43'08	50'05	-15'17	0'0	0'1	Farrakapore	Fur
NH	NH	0'03	NH	0'25	-0'20	47'21	68'00	-11'08	0'0	0'2	Dacca	Dac
NH	NH	0'03	NH	0'13	-0'13	46'10	71'33	-7'13	0'0	0'2	Commilla	...
NH	NH	0'01	NH	0'10	-0'10	40'04	69'09	-25'04	0'0	0'1	Mymensingh	...
NH	0'00	NH	0'00	0'10	-0'10	37'79	50'01	-15'12	0'4	0'0	Sorejgunge	...
NH	...	...	...	...	...	...	...	...	...	...	Bogra	...
NH	0'01	NH	0'01	0'18	-0'18	34'07	63'24	-14'57	0'3	0'0	Rampore Banuleah	...
NH	NH	NH	0'01	0'15	-0'17	38'75	50'55	-17'41	0'0	0'0	Dinapore	...
NH	NH	NH	NH	0'13	-0'13	40'10	70'53	-25'43	0'0	0'0	Rangpore	...
NH	NH	NH	NH	0'20	-0'20	95'23	116'04	-16'10	0'0	0'0	Jalpigoree	...
NH	0'02	...	...	0'24	...	...	101'31	...	...	...	Darjeeling	...
NH	NH	NH	NH	0'00	-0'00	40'15	57'05	-11'47	0'0	0'0	Purnea	...
NH	...	...	...	...	...	...	...	...	...	...	MeauHarporo	...
NH	NH	0'01	NH	0'03	-0'03	34'00	42'14	-7'47	0'0	0'1	Darongpore	...
NH	NH	NH	NH	0'03	-0'03	41'79	43'05	-2'10	0'0	0'0	Mothari	...
NH	NH	0'03	NH	0'04	-0'04	50'53	40'51	-10'20	0'0	0'2	Chui	...
NH	...	...	...	...	...	...	...	...	...	...	Don	...
NH	NH	0'00	NH	0'00	-0'00	30'10	30'12	-10'08	0'0	0'2	Sua	...
NH	...	...	...	...	...	...	...	...	...	...	Arri	...
NH	NH	0'05	NH	0'03	-0'03	27'70	30'07	-11'03	0'0	0'3	Gy	...
NH	NH	0'03	NH	0'03	-0'03	20'00	30'50	-11'30	0'0	0'1	be	...
NH	NH	NH	NH	0'03	-0'03	31'03	41'00	-10'55	0'0	0'0	h	...
0'03	NH	NH	NH	0'03	-0'03	33'44	45'07	-15'23	0'0	0'0	...	...
0'02	0'01	0'01	0'01	0'03	-0'02	24'11	40'51	-12'50	0'3	0'1	...	...
0'04	0'03	0'03	0'03	0'14	-0'06	37'08	47'23	-10'17	0'2	0'2	...	...
NH	NH	NH	NH	0'20	-0'20	44'07	51'23	-7'15	0'0	0'0	...	...

period for the past ten years. The variations are negative when the mean for the week is less than the corresponding 10. The number denoting cloud amount represents the part of the sky covered, the whole sky being denoted by 10. The number denoting the period in question during the past 12 years. The number denoting the district and the number denoting the station at which it is taken.

SUPPLEMENT TO THE CALCUTTA GAZETTE, DECEMBER 31, 1884

Report of Rainfall in Bengal for the week ending Friday (6 p.m.), the 26th December 1884.

[illegible]

# MEMORANDA.

BIRTHS and deaths were registered in the first class Municipalities in Bengal during the week ending 18th December 1884, at the rates, respectively, of 26.9 and 39.1 per 1,000 of population, against 26.5 and 37.6 per 1,000, respectively, in the preceding week ending 6th December, indicating an improvement in the registration of deaths.

2. The following Municipalities returned the highest proportions of births and deaths:—

Births.		Ratio per mille.	Deaths.		Ratio per mille.
Monghyr	...	91.3	Serampore	...	160.9
Cumilla	...	89.1	Purneah	...	85.7
Durhhanga	...	87.7	Poori	...	69.8
Ranaghat	...	86.0	Suburbs of Calcutta	...	50.9
Gya	...	84.1	Dacca	...	49.9
Serampore	...	81.4	Jessore	...	49.0
			Bhagulpore	...	48.0
			Hughli	...	47.0
			Narainganj	...	45.8
			Kishnaghur	...	43.5
			Gya	...	41.1
			Chittagong	...	35.2
			Beaulah	...	34.1
			Monghyr	...	33.4
			Howrah	...	31.8
			Burdwan	...	29.5
			Durhhanga	...	29.9

3. The principal diseases specified in the table appended to this memoranda proved fatal at the rates exhibited below:—

	Ratio per mille during the weeks ending—	
	13th December 1884.	6th December 1884.
Cholera	...	5.3
Small-pox	...	3
Fever	...	18.4
Bowel-complaints	...	5.5
Injury	...	1
Other causes	...	8.9

The only noticeable fact disclosed by the above figures is that the mortality from cholera had increased sensibly.

4. Of the above-named diseases, cholera, fever, bowel-complaints, and the diseases classed under the head of "Other causes" were noticeably fatal to life in the following Municipalities:—

Cholera.		Fever.		Bowel-complaints.		Other Causes.	
	Ratio per mille.		Ratio per mille.		Ratio per mille.		Ratio per mille.
Serampore	131.5	Purneah	51.9	Bhagulpore	17.2	Poori	32.1
Narainganj	33.2	Jessore	49.0	Durhhanga	12.6	Dacca	18.7
Chittagong	23.5	Santipore	29.8	Hughli	12.1	Gya	16.4
Suburbs of Calcutta	5.8	Beaulah	28.9	Suburbs of Calcutta	10.1	Suburbs of Calcutta	12.8
Hughli	5.4	Kishnaghur	28.4				
Howrah	4.4	Poori	25.8				
Dacca	3.9	Burdwan	24.4				
		Mozuffarpore	24.3				
		Hughli	22.8				
		Suburbs of Calcutta	21.7				
		Serampore	21.6				
		Dacca	21.5				
		Gya	21.2				
		Bhagulpore	20.8				

5. Under the heads of Sex, Class and Age, the mortality of the week stood as follows:—

According to Sex.		According to Class.		According to Age.	
	Ratio per mille.		Ratio per mille.		Ratio per mille.
Males	40.8	Christians	39.1	Under 1 year	236.7
Females	37.3	Hindus	28.3	1 and under 5 years	51.7
Ratio of male deaths to every 100 female deaths	124	Mahomedans	40.8	5 " 10 "	24.6
		Buddhists	48.4	10 " 15 "	17.2
		Other classes	72.8	15 " 20 "	32.9
				20 " 30 "	28.7
				30 " 40 "	18.5
				40 " 50 "	32.8
				50 " 60 "	63.5
				60 years and upwards	77.5

B. LIDDERDALE, M.D., Deputy Surgeon-General,  
Sanitary Commissioner for Bengal.

The 29th December 1884.

Table showing the names of the Registration of Births and Deaths in the First Class Municipalities in Bengal during the week ending 11th December 1884.

DISTRICTS.		POPULATION.		BIRTHS.				MORTALITY ACCORDING TO—										Sex.			
				NUMBER OF—		RATIO PER 1,000 OF POPULATION PER ANNUM.		DISEASE.													
								DEATHS FROM—												RATIO PER 1,000 OF POPULATION PER ANNUM.	
								RATIO PER 1,000 OF POPULATION PER ANNUM.													
Males.		Females.		Total.		Males.		Females.		Total.		Ratio of male deaths to every 100 female deaths.		Ratio of male deaths to every 100 female deaths.							
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Males.		Females.		Total.		Males.		Females.		Total.		Ratio of male deaths to every 100 female deaths.		Ratio of male deaths to every 100 female deaths.							
Males.		Females.		Total.		Males.		Females.		Total.		Ratio of male deaths to every 100 female deaths.		Ratio of male deaths to every 100 female deaths.							
Males.		Females.		Total.		Males.		Females.		Total.		Ratio of male deaths to every 100 female deaths.		Ratio of male deaths to every 100 female deaths.							
Males.		Females.		Total.		Males.		Females.		Total.		Ratio of male deaths to every 100 female deaths.		Ratio of male deaths to every 100 female deaths.							
Males.		Females.		Total.		Males.		Females.		Total.		Ratio of male deaths to every 100 female deaths.		Ratio of male deaths to every 100 female deaths.							
Males.		Females.		Total.		Males.		Females.		Total.		Ratio of male deaths to every 100 female deaths.		Ratio of male deaths to every 100 female deaths.							
Males.		Females.		Total.		Males.		Females.		Total.		Ratio of male deaths to every 100 female deaths.		Ratio of male deaths to every 100 female deaths.							
Males.		Females.		Total.		Males.		Females.		Total.		Ratio of male deaths to every 100 female deaths.		Ratio of male deaths to every 100 female deaths.							
Males.		Females.		Total.		Males.		Females.		Total.		Ratio of male deaths to every 100 female deaths.		Ratio of male deaths to every 100 female deaths.							
Males.		Females.		Total.		Males.		Females.		Total.		Ratio of male deaths to every 100 female deaths.		Ratio of male deaths to every 100 female deaths.							
Males.		Females.		Total.		Males.		Females.		Total.		Ratio of male deaths to every 100 female deaths.		Ratio of male deaths to every 100 female deaths.							
Males.		Females.		Total.		Males.		Females.		Total.		Ratio of male deaths to every 100 female deaths.		Ratio of male deaths to every 100 female deaths.							
Males.		Females.		Total.		Males.		Females.		Total.		Ratio of male deaths to every 100 female deaths.		Ratio of male deaths to every 100 female deaths.							
Males.		Females.		Total.		Males.		Females.		Total.		Ratio of male deaths to every 100 female deaths.		Ratio of male deaths to every 100 female deaths.							
Males.		Females.		Total.		Males.		Females.		Total.		Ratio of male deaths to every 100 female deaths.		Ratio of male deaths to every 100 female deaths.							
Males.		Females.		Total.		Males.		Females.		Total.		Ratio of male deaths to every 100 female deaths.		Ratio of male deaths to every 100 female deaths.							
Males.		Females.		Total.		Males.		Females.		Total.		Ratio of male deaths to every 100 female deaths.		Ratio of male deaths to every 100 female deaths.							
Males.		Females.		Total.		Males.		Females.		Total.		Ratio of male deaths to every 100 female deaths.		Ratio of male deaths to every 100 female deaths.							
Males.		Females.		Total.		Males															

No female deaths.

No female deaths.



[illegible]

**B. LIDDERDALE, M.D., Deputy Surgeon-General,  
Sanitary Commissioner for Bengal.**

OFFICE OF SANITARY COMMISSIONER FOR BENGAL,  
The 29th Dec. 1894.



## Weekly Return of Traffic Receipts on Indian Railways.

## EASTERN BENGAL STATE RAILWAY.

Approximate Return of Traffic for week ended 13th December 1884, on 350 miles open, including Calcutta and South-East Bengal Central Railway mileage.

	COACHING TRAFFIC.		MERCHANDISE AND MINERAL TRAFFIC.		Other earnings (estimated), including steam-boat.	Total earnings.	TRAFFIC TRAIL	
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.
		Rs. A. P.	Mds. c.	Rs. A. P.	Rs. A. P.	Rs. A. P.		
A.—Total traffic for the week ...	87,391	86,428 0 0	8,30,909 0	53,824 0 0	11,015 0 0	1,04,129 0 0	11,339	6,089
Or per mile of railway ...	271	101 0 0	222 0	144 0 0	.....	205 0 0	.....	.....
For previous 52 weeks of half-year ...	1,940,023	7,83,234 0 0	76,53,778 0	17,73,374 0 0	1,06,628 0 0	27,58,154 0 0	307,053	265,475
Total for 24 weeks ...	2,040,419	8,19,665 0 0	78,84,057 0	18,37,198 0 0	2,07,538 0 0	28,64,692 0 0	322,234	280,104
COMPARISON.								
B.—Total for corresponding week of previous year ...	85,303	89,227 0 0	2,04,085 0	35,540 0 0	6,543 0 0	21,710 0 0	10,377	6,970
Per mile of railway corresponding period of previous year ...	261	133 0 0	719 0	116 0 0	.....	504 0 0	.....	.....
Total to corresponding date of previous year ...	1,359,000	3,56,207 0 0	37,00,645 0	11,69,710 0 0	2,39,093 0 0	24,86,443 0 0	239,831	196,231

A—Includes receipts of Calcutta and South-Eastern Railway, and 50 per cent. of receipts of Bengal Central Railway, viz. Rs. 3,068 and Rs. 1,268 respectively, apportioned over the several heads of traffic.

B—Includes share of Bengal Central Railway receipts due to Eastern Bengal State Railway for working, viz. Rs. 1,268, and Calcutta receipts Rs. 4,923.

## FINANCIAL YEAR.

Approximate Statement of gross receipts of the Eastern Bengal State Railway.

RECEIPTS FOR WEEK ENDING 13TH DECEMBER 1883.			RECEIPTS FOR WEEK ENDING 13TH DECEMBER 1884.			TOTAL RECEIPTS FROM 1ST APRIL 1883 TO 13TH DECEMBER 1883.			TOTAL RECEIPTS FROM 1ST APRIL 1884 TO 13TH DECEMBER 1884.			Total increase in 1884.
Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked.	
	Rs.	Rs.		Rs.	Rs.		Rs.	Rs.		Rs.	Rs.	Rs.
1884	31,710	288	269*	1,06,129	286	244	27,28,023	15,217	236	29,01,839	11,544	1,88,810

\*Increase in mileage.

Bengal Central Railway ... .. 74

## BENGAL CENTRAL RAILWAY.

Approximate Return of Traffic for week ended 13th December 1884 on 126 Miles open.

	COACHING TRAFFIC.		MERCHANDISE AND MINERAL TRAFFIC.		Other earnings (estimated).	Total earnings.	TRAFFIC TRAIL	
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.
		Rs. A. P.	Mds. c.	Rs. A. P.	Rs. A. P.	Rs. A. P.		
Total traffic for the week ...	39,810	7,544 0 0	17,981 0	1,470 0 0	30 0 0	9,330 0 0	3,551	.....
Or per mile of railway ...	316	62 0 0	142 0	12 0 0	.....	74 0 0	.....	.....
For previous 52 weeks of half-year ...	447,458	1,63,282 0 0	2,65,714 0	23,641 0 0	1,069 0 0	1,67,702 0 0	74,284	.....
Total for 24 weeks ...	426,268	1,71,120 0 0	2,71,695 0	24,011 0 0	1,085 0 0	1,67,132 0 0	78,785	.....
COMPARISON.								
Total for corresponding week of previous year ...	13,004	2,222 0 0	5,253 0	266 0 0	10 0 0	2,539 0 0	1,556	.....
Per mile of railway corresponding period of previous year ...	260	43 0 0	152 0	0 0 0	.....	40 0 0	.....	.....
Total to corresponding date of previous year ...	240,098	42,467 0 0	3,19,871 0	5,541 0 0	676 0 0	51,680 0 0	22,302	.....

## FINANCIAL YEAR.

Approximate Statement of Gross Receipts of the Bengal Central Railway.

RECEIPTS FOR WEEK ENDING 13TH DECEMBER 1883.			RECEIPTS FOR WEEK ENDING 13TH DECEMBER 1884.			TOTAL RECEIPTS FROM 1ST APRIL 1883 TO 13TH DECEMBER 1883.			TOTAL RECEIPTS FROM 1ST APRIL 1884 TO 13TH DECEMBER 1884.			Total increase in 1884.
Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked.	
	Rs.	Rs.		Rs.	Rs.		Rs.	Rs.		Rs.	Rs.	Rs.
53	2,539	49	136	9,340	74	25	20,259	2,205	126	2,53,690	5,070	2,53,331

## BENGAL PROVINCIAL RAILWAYS.

## Weekly Statement of Traffic Receipts.

Date of return received.	Name of Railway.	Length open.	RECEIPTS FOR WEEK ENDING		TOTAL RECEIPTS FROM 1st JANUARY		Total increase in 1894.	Total decrease in 1894.	Percentage of increase or decrease.
			1st November 1893.	1st November 1894.	To 1st November 1893.	To 1st November 1894.			
		Miles.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	
December 30.	Calcutta & Bengal.	24.	22,347 0 0	48,272 0 0	18,000 0 0	17,041 10 0	1,958 10 0	1,958 10 0	+11
31.	Calcutta & Bengal.	24.	21,742 0 0	27,458 0 0	1,25,400 0 0	1,25,100 0 0	300 0 0	300 0 0	+0
31.	Calcutta & Bengal.	24.	2,700 0 0	4,200 0 0	79,700 0 0	80,510 0 0	810 0 0	810 0 0	+1
	Total.	502.	48,240 0 0	78,230 0 0	16,00,000 0 0	17,84,710 0 0	1,84,710 0 0	1,84,710 0 0	+12

## DARJEELING-HIMALAYAN RAILWAY COMPANY, LIMITED.

	Rs.	A.	P.
Earnings for week ending 13th December 1894.	4,578	0	0
Corresponding week last year.	4,070	13	8
Increase.	507	2	9
Receipts from 1st July to 13th December 1894.	2,04,100	7	1
from 1st July to 13th December 1893.	2,00,405	10	1
Increase.	3,694	12	0
	3,114		
Miles open week ending 13th December 1894.	60		
Corresponding week last year.	60		
	60		
Receipts per mile open week ending 13th December 1894.	103	0	0
Corresponding week last year.	100	0	0
Increase.	3	0	0

DARJEELING, 14th December 1894.

W. STEVENSON, Secretary.

## DARJEELING-HIMALAYAN RAILWAY COMPANY, LIMITED.

	Rs.	A.	P.
Earnings for week ending 20th December 1894.	4,161	0	0
Corresponding week last year.	3,814	10	11
Decrease.	347	10	11
Receipts from 1st July to 20th December 1894.	2,12,521	7	1
from 1st July to 20th December 1893.	2,09,077	6	9
Increase.	3,444	1	2
	3,444		
Miles open week ending 20th December 1894.	60		
Corresponding week last year.	60		
	60		
Receipts per mile open week ending 20th December 1894.	102	0	0
Corresponding week last year.	100	0	0
Decrease.	2	0	0

DARJEELING, 14th December 1894.

W. STEVENSON, Secretary.